February 14, 2023
7:00 p.m.

Brooklyn Park Council Chambers
5200 85th Avenue North
Brooklyn Park, MN 55443

PLANNING COMMISSION REGULAR MEETING – AGENDA #3

For reasonable accommodations or alternative formats, please provide a 72-hour notice by calling 763-424-8000 or emailing Josie.Shardlow@brooklynpark.org. Si usted necesita esta información en español, llame al 763-424-8000 y solicite un intérprete. Yog xav tau kev pab, hu 763-493-8059.

Commissioners: Chair Liam Cavin, Vice Chair Kathy Fraser, General Officer John Kiekow, Christopher Udomah, Philip Gaye-Bai, Teshite Wako, Maggie Borer, Shereese Turner.
Staff Liaison Paul Mogush, Amber Turnquest, Erin McDermott and Matt Hayes-Regan.

Members of the public can monitor the meeting by watching it on CCX Media Channel 16 or by livestreaming it at https://nwsccc-brooklynpark.granicus.com/ViewPublisher.php?view_id=5.

Anyone who wants to address the Planning Commission during the Public Comment period may do so in person or by calling **763-493-8056** or emailing planning@brooklynpark.org by 4:00 p.m. on the meeting day. You will be asked to provide your name, address, email, and phone number. You will then be registered to speak during the Public Comment period or on the agenda item and will be provided with the call-in number to address the Planning Commission.

I. ORGANIZATIONAL BUSINESS

1. CALL TO ORDER/ROLL CALL/PLEDGE OF ALLEGIANCE

2. EXPLANATION BY CHAIR

Please be advised that the public hearings are recorded and televised live on cable television and web-streamed over the internet at brooklynpark.org. The audio system will not pick up comments from the seating area. If you want to be heard and made a part of the public record, please go to the podium or, if participating remotely, turn on your camera; speak into the microphone, stating your full name and address. Please sign the public hearing logbook on the table near the entrance to the Council Chambers if you are attending in person to ensure accuracy of name and address in the public record. Please note that the agenda for tonight's meeting indicates that the Commission Chair has the prerogative to invoke a time limit for speakers during any public hearing in the interest of maintaining focus and the effective use of time. Thank you in advance for your cooperation.

The Planning Commission consists of 11 resident-volunteer members, two of which are young adult members, appointed by the City Council to advise the City Council on planning and land use issues. The Commission discusses and evaluates development proposals based on zoning regulations and comprehensive plan policies. The Planning Commission vote is a recommendation that is forwarded to the City Council for official and final action.

3. APPROVAL OF AGENDA

II. REQUIRED DUTIES

4. CONSENT AGENDA

4.1 **Approval of Minutes** January 10, 2024 Regular Meeting
4.2 **Approval of Minutes** January 24, 2024 Work Session
4.3 **Adoption of Bylaws**

5. PUBLIC HEARING

5.1. JJ's Fish & Chicken – Planning Case #23-120 Site Plan Review for an addition to an existing restaurant on a property zoned B2 – Neighborhood Retail Business located at 7749 Zane Ave. N.

This request is for the construction of an addition to the existing restaurant located at 7749 Zane Ave N. This addition will include a walk-up patio to serve pedestrian customers as well as customers to be seated inside the restaurant.

The existing structure on the property was constructed in 1962 as a Dairy Queen. At the time of development the Village of Brooklyn Park did not have a zoning ordinance in place.

5.2. Clean Freak Car Wash – Planning Case #24-101 Site Plan and Conditional Use Permit request for the development of a car wash on a property zoned PCDD – Planned Community Development District located at 8555 Edinburgh Center Drive.

This request is for the development of a new car wash facility on an undeveloped property in the PCDD zoning district. This request is for development of the final undeveloped lot in the Edinburgh Center development.

5.3. Mississippi River Corridor Critical Area (MRCCA) – Zoning Code Text Amendment: 152.530

In 2017, the Minnesota Legislature passed a law requiring all cities within the Mississippi River Corridor Critical Area (MRCCA) to adopt updated regulations protecting the river. The proposed amendment must be adopted into the Zoning Ordinance to comply with state law (Minn. Rule 6106.0070 Subp. 5.).

The MRCCA was established in 1976 by State legislation, at which time the boundaries were described. Within Brooklyn Park, there are three MRCCA districts identified, Rural and Open Space (ROS), River Neighborhood (RN), and Separated from River (SR). The only properties identified as ROS are islands in the Mississippi River. Properties identified as RN are riparian lots– those adjacent to the river, and properties identified as SR are non-riparian lots. The boundary of the MRCCA for the majority of the city is West River Road, with a portion of the Willowstone neighborhood being included. While the map of affected properties is attached to this report, the Brooklyn Park Zoning Map is not being amended at this time, as the entire map will be amended as part of the overall 2040 Comprehensive Plan zoning update which is anticipated to be completed by June 2024.

The Department of Natural Resources (DNR) provided a model ordinance for each municipality affected by the MRCCA to adopt. The standards within this amendment are the same standards against which the DNR was previously reviewing development. By adopting this language into ordinance, it provides transparency to the property owners impacted by these regulations.

5.4. Crystal Airport Joint Airport Zoning Board (JAZB) Proposed Text Amendment

In September 2021 the City Council adopted Resolution #2021-132 joining the JAZB and appointing two members to represent Brooklyn Park, City Councilmember Wynfred Russell (replaced in 2023 by Councilmember Maria Tran) and Planning Director Paul Mogush. In 2023, property owners received notification from the MAC regarding the proposed updated ordinance with an opportunity to testify at a public hearing before the Crystal Airport Joint Airport Zoning Board (JAZB). On November 8, 2023, the JAZB adopted the ordinance, following some changes in response to public comment.

Minnesota Statute 360.036 was adopted in 1983, which established a Joint Airport Zoning Board (JAZB) comprised of the Metropolitan Airports Commission (MAC) and the communities surrounding the Crystal Airport enacted a zoning ordinance intended to ensure the safety of airport operations by regulating land uses and building height near the runways. On July 28,

2021, the MAC notified the City of Brooklyn Park of an opportunity to join a newly constituted JAZB for the purpose of updating the airport zoning ordinance. There are two factors motivating the ordinance update. First, the legislature enacted changes to airport zoning statutes in 2019 that allow more flexibility in airport zoning ordinances than was allowed in 1983. Second, the MAC completed several changes to the layout of Crystal Airport in 2020, including lengthening the main runway and converting the parallel runway into a parallel taxiway.

The City of Brooklyn Park is now adopting these standards into the Zoning Ordinance in compliance with state law. The content of this text amendment contains the criteria previously established by Minnesota Statute 360.063, Subd. 3(2)(b) for which all current developments are being reviewed.

In addition to the adoption of the text approved by the JAZB, this zoning text amendment also formally establishes the Airport (AP) Overlay district which will be added as part of the upcoming Zoning Map amendment.

6. OTHER BUSINESS

6.1 2024 Work Plan

Each Brooklyn Park commission develops an annual work plan at the beginning of the year using a standard format. The 2024 work plan items include: processing land use application and providing recommendation to the City Council; zoning code update; and planning for development northwest of Highways 160 and 610.

III. DISCUSSION ITEMS

IV. VERBAL REPORTS AND ANNOUNCEMENTS

7. COUNCILMEMBER LIASON COMMENTS
8. PLANNING COMMISSION COMMENTS
9. STAFF LIASON COMMENTS

V. ADJOURNMENT

UNAPPROVED MINUTES

MINUTES OF THE BROOKLYN PARK PLANNING COMMISSION
Regular Meeting – January 10, 2024

1. CALL TO ORDER

The meeting was called to order at 7:01 PM.

2. ROLL CALL/PLEDGE OF ALLEGIANCE

Those present were: Commissioners Cavin, Fraser, Kiekow, Turner, Udomah, and Wako; Planning Assistant Hayes-Regan and Planning Director Mogush.

Those arrived late: None.

Those not present were: Commissioner Borer (with prior notice); Commissioner Gaye-Bai; Councilmember McGarvey; Principal Planner Turnquest and Associate Planner McDermott.

3. EXPLANATION BY CHAIR

4. APPROVAL OF AGENDA

MOTION WAKO, SECOND UDOMAH, TO APPROVE THE JANUARY 10, 2024 AGENDA.

MOTION CARRIED UNANIMOUSLY.

5. ORGANIZATIONAL MEETING

5.1. ELECTION OF OFFICERS

Planning Director Mogush stated that the Commission elects its officers annually and once that is done the Commission would need to adopt the bylaws. He noted that there are no proposed changes to the bylaws. He reviewed the duties of each of the officer positions. He noted that Commissioner Kiekow will be leaving the Commission after his term expires in March. He also noted that the Business Forward Liaison is no longer a needed position as that group no longer exists.

A. CHAIR

Commission Chair Cavin opened the floor for nominations for the position of Chair.

MOTION KIEKOW, SECOND TURNER, TO NOMINATE COMMISSIONER CAVIN AS CHAIR OF THE PLANNING COMMISSION FOR 2024.

Commission Chair Cavin accepted the nomination.

There were no other nominations.

MOTION CARRIED UNANIMOUSLY.

B. VICE CHAIR

Commission Chair Cavin opened the floor for nominations for the position of Vice Chair.

MOTION CAVIN, SECOND TURNER, TO NOMINATE COMMISSIONER FRASER AS VICE CHAIR OF THE PLANNING COMMISSION FOR 2024.

Commissioner Fraser accepted the nomination.

There were no other nominations.

MOTION CARRIED UNANIMOUSLY.

C. GENERAL OFFICER

Commission Chair Cavin opened the floor for nominations for General Officer.

MOTION TURNER, SECOND CAVIN, TO NOMINATE COMMISSIONER WAKO AS THE GENERAL OFFICER OF THE PLANNING COMMISSION FOR 2024.

Commissioner Wako accepted the nomination.

There were no other nominations.

MOTION CARRIED UNANIMOUSLY.

~~**D. BUSINESS FORWARD LIAISON**~~

5.2. ADOPTION OF BYLAWS

Commission Chair Cavin asked if there are any proposed changes to the bylaws. He referenced bylaw eight, the second paragraph, which states the Commission is composed of nine resident volunteers. He suggested that be changed to 11 to reflect the two youth members that are outlined in City ordinance.

Planning Director Mogush agreed that would be an appropriate change. He noted that the seats are available although they have not had success in filling those youth positions.

Commissioner Fraser suggested including clarity that two of the 11 are youth members.

Commissioner Udomah asked how youth members would impact the issue of quorum. He asked if the Business Forward Liaison position should also be stricken from the bylaws.

Planning Director Mogush commented that the quorum requirements did not change based on youth members. He agreed that the Business Forward Liaison position could be removed from the bylaws.

MOTION CAVIN, SECOND TURNER, TO STRIKE THE BUSINESS FORWARD LIAISON FROM THE BYLAWS.

MOTION CARRIED UNANIMOUSLY.

MOTION CAVIN, SECOND UDOMAH, TO CHANGE THE NUMBER OF COMMISSION MEMBERS TO 11, REFLECTING THAT TWO MEMBERS ARE YOUTH MEMBERS WITHIN THE BYLAWS.

MOTION CARRIED UNANIMOUSLY.

Commissioner Wako asked if the quorum requirement should be changed in the event that the youth members are added in the future, as a quorum should be slightly more than half of the group.

Commissioner Kiekow commented that the quorum should be a percentage of the available members. He suggested using the formula of the number of filled seats, divided by two, plus one.

Commissioner Udomah agreed, noting that is why he brought that issue up originally.

Planning Director Mogush commented that he agrees that the quorum reflected in the bylaws is not typical, at four members, as with nine members it should be five. He did not foresee any problems changing the quorum requirement and agreed that it should be one more than half. He suggested the language that a quorum would be greater than 50 percent of the seated members.

MOTION CAVIN, SECOND WAKO, TO CHANGE THE QUORUM REQUIREMENT TO STATE THAT A QUORUM SHALL CONSIST OF A MINIMUM OF GREATER THAN 50 PERCENT OF THE APPOINTED AND SEATED COMMISSIONERS WITHIN THE BYLAWS.

MOTION CARRIED UNANIMOUSLY.

MOTION UDOMAH, SECOND TURNER, TO ADOPT THE BYLAWS FOR 2024 AS AMENDED.

MOTION CARRIED UNANIMOUSLY.

6. CONSENT AGENDA

A. Minutes – November 8, 2023

MOTION UDOMAH, SECOND KIEKOW, TO APPROVE THE JANUARY 10, 2024 CONSENT AGENDA.

MOTION CARRIED UNANIMOUSLY.

7. PUBLIC HEARING

No items scheduled.

8. OTHER BUSINESS

No items scheduled.

9. DISCUSSION ITEMS

No comments.

10. INFORMATION ITEMS

A. Council Comments

No comments.

B. Commission comments

Commissioner Fraser commented that the business forum was a great event.

C. Staff Comments

Planning Director Mogush commented that the officers will begin their new roles in April, as that allows overlap for the newly appointed officers to learn the positions. He stated that there will be a worksession on January 24th and noted that it will be likely that worksessions will continue over the next several months as they continue to review proposed updates to the zoning and zoning map.

11. ADJOURNMENT

Commission Chair Cavin adjourned the meeting at 7:37 PM.

Respectfully submitted,

Paul Mogush
Planning Director

UNAPPROVED MINUTES

MINUTES OF THE BROOKLYN PARK PLANNING COMMISSION
Work Session – January 24, 2024

1. CALL TO ORDER

The meeting was called to order at 7:00 PM.

Those present were: Commissioners Cavin, Fraser, Kiekow, and Borer; Councilmember McGarvey; Planning Assistant Hayes-Regan, Associate Planner McDermott, Planning Director Mogush, and Principal Planner Turnquest.

Those excused were: Commissioners Turner, Udomah, Wako, and Gaye-Bai.

2. GENERAL INFORMATION

None.

3. DISCUSSION ITEMS/GENERAL ACTION ITEMS

A.1 Electric Mobility Opportunities for Brooklyn Park

City of Brooklyn Park Recycling Manager Tim Pratt introduced Dustin Weigl and Nicole Rosner of National Renewable Energy Laboratory (NREL).

Weigl and Rosner presented to the commissioners and staff the report Electric Mobility Opportunities for Brooklyn Park, Minnesota, and the U.S. Department of Energy's (DOE) Communities Local Energy Action Program (LEAP) Pilot. The presentation included: an overview of Communities LEAP Pilot; an introduction to the Electric Mobility Report; an overview of electric mobility programs; infrastructure needs generally; opportunities specific to Brooklyn Park; and an overview of next steps, including the Pathways Toward Electric Mobility report that has an expected publication of March 2024.

At the conclusion of the presentation, Weigl and Rosner facilitated a discussion with commissioners and staff. The discussion included questions about the priorities and effectiveness of the LEAP Pilot, opportunities that Brooklyn Park could miss out and/or fall behind on, and exploring options in Brooklyn Park that residents can take advantage of now and in the future.

Planning Director Mogush noted that the presentation was relevant for planning and development because of the importance of developing sustainable infrastructure.

Recycling Manager Pratt concluded the discussion by highlighting educational resources that are available, the opportunity for providing residents with access to critical services, and the buildout of electric vehicle charging stations.

A.2 Zoning Code Update

Principal Planner Turnquest presented to the commissioners and staff a timeline for changes to the City of Brooklyn Park's zoning code. The presentation included background about why the zoning code needs to be updated and a timeline for updating the zoning code. Principal Planner Turnquest highlighted two phases of the scope of work: phase one involves a series

of text amendments to the current city code, and phase two involves any post-land use amendments.

Principal Planner Turnquest said that the Planning Commission Work Sessions and Regular Meetings will be used for reviewing, finalizing, and recommending the text amendments to the City Council.

Principal Planner Turnquest then facilitated a conversation with commissioners and staff about the updates. Items included in the conversation were the scope of changes to the zoning code, questions about resources the City is using for implementing and administering the zoning code update, and the expectations of staff and commissioners, including of new commissioners when a new term starts in April, leading up to and during Planning Commission Work Sessions and Regular Meetings.

Emphasizing the timeline Principal Planner Turnquest presented, Planning Director Mogush noted to the commissioners that there will be several Work Sessions in the coming months happening in conjunction with the Planning Commission Regular Meetings.

4. VERBAL REPORTS AND ANNOUNCEMENTS

A. COUNCILMEMBER LIASON COMMENTS

Councilmember McGarvey gave an update to commissioners and staff about City Council's legislative priorities meeting.

B. PLANNING COMMISSION COMMENTS

None.

C. STAFF LIASON COMMENTS

None.

5. ADJOURNMENT

Commissioner Chair Fraser adjourned the meeting at 8:32 PM.

Respectfully submitted,

Paul Mogush
Planning Director

Brooklyn Park
Community Development
5200 85th Avenue North
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763-493-8056

Planning Commission
2024 Bylaws

ORGANIZATION

1. The Planning Commission Officers shall be:

   Chair – Liam Cavin

   Vice-Chair – Kathy Fraser

   General Officer – Teshite Wako

   ~~Business Forward Advisory Board Liaison –~~

   Term of officers. All officers shall be elected by a vote of the commission members at the annual organizational meeting held at the first meeting in January. Officers shall serve for a one-year term beginning at the first meeting in April.

2. Duties of the Officers:

   A. Chair:

      1. The Chair shall preside at all Public Hearings and the annual organizational meeting of the Commission. The Chair shall also preside at the Commission work sessions and non-Public Hearing meetings in the absence of the Vice-Chair.

      2. The Chair shall preserve order and decorum and shall decide questions of order.

      3. The Chair may call special meetings stating the purpose of such meetings and be posted at least three days or 72 hours in advance of the meeting. However, for any special meeting at which there are to be items that require a public hearing, adequate time shall be given to allow for the publication and mailing of notices in accordance with applicable provisions of the City Code and State Statutes.

      4. The Chair shall be responsible to have the staff report on the Status of Previous Recommendations made to the Council, stating the Planning Commission's recommendations and Council action.

      5. The Chair shall be responsible to have the staff prepare an Annual Report to the City Council.

6. The Chair or his or her designee shall represent the Planning Commission at City Council meetings for the purpose of presenting the Commission recommendations on items to be considered by the Council.

B. Vice-Chair:

1. The Vice-Chair shall preside at all meetings in the absence of the Chair.

2. The Vice-Chair shall chair the Planning Commission work sessions and other non-Public Hearing Commission meetings.

3. The Vice-Chair shall work with the Planning Commission Chair and Planning Staff to set agendas for Commission work sessions and other applicable meetings.

C. General Officer:

1. The General Officer shall preside at all meetings in the absence of the Chair and Vice-Chair.

2. The General Officer shall record attendance and be responsible for attendance reports.

3. The General Officer shall report to the Chair every quarter the attendance percentage of every member.

4. The General Officer shall monitor the time during all public hearings and shall be responsible for putting forth the motion to extend the public hearings past 11:00 p.m. when necessary.

~~D. Business Forward Advisory Board Liaison~~

~~1. The Business Forward Advisory Board (BFAB) Liaison shall attend regular BFAB meetings and provide feedback on business programming, initiatives, and policy from the perspective of the Planning Commission.~~

~~2. Report to the Planning Commission any BFAB initiatives relevant to the work of the Planning Commission.~~

BYLAWS

1. Each Wednesday shall be considered a regularly scheduled official meeting night. For any Wednesday falling on a legal holiday, the following Thursday shall be considered the regular meeting.

A. Official Public Hearings shall be at 7:00 pm on the second Wednesday of each month unless otherwise directed by the Chair.

B. In the event that there are more public hearings than can be reasonably expected to be concluded by 11:00 p.m., the Chair and the Planning Staff shall be empowered to schedule a second official Public Hearing Meeting for another Wednesday during the same month to take care of the overload.

C. The Chair shall have prerogative to cancel or postpone any regularly scheduled Meetings.

D. The Chair shall have the prerogative to invoke a time limit for speakers during any public hearing in the interest of maintaining focus and the effective use of time.

E. Work Sessions shall be the fourth Wednesday of the month.

F. If a public hearing is reasonably anticipated to last under an hour, the work session may be moved from the fourth Wednesday to the second Wednesday following the public hearing at the discretion of the Chair.

G. The Planning Director may announce a future meeting as cancelled due to lack of public hearing applications or holiday during the Information Items section of a meeting.

2. All public hearings shall be at the City Hall and shall be called at 7:00 p.m. and shall conclude at 11:00 p.m. meetings may be held via technology consistent with state law and City policy. No new business shall commence unless waived by the majority. Any business unfinished at the scheduled closing time shall be taken up at a subsequent meeting designated by the Chair.

3. An organizational meeting shall be held on the second Wednesday in January. Business at this meeting shall include review and/or amendments to the Bylaws, election of a Chair, a Vice-Chair,General Officer and a Business Forward Advisory Board Liaison.

The officers elected shall begin to serve their term the following April.

4. Organizational rules regarding a quorum:

A. A quorum shall consist of a minimum of ~~four~~ a majority of currently appointed and seated Commissioners. In no case shall a Public Hearing be held if only three Commissioners or fewer are present. In the absence of a quorum, those present shall adjourn any items of business requiring official Commission action to a specified time.

B. Prior to a meeting a member may be excused from an individual meeting for reasons of illness, work, or out-of-town trips.

5. If the Chair or Vice-Chair resigns his/her appointment between the regular election cycle, then the remaining officers shall move up in rank and an election shall be held for the General Officer position.

6. The Chair shall call the meeting to order and the General Officer shall call the roll and announce a quorum. In the absence of the General Officer, the Chair shall appoint a General Officer pro tem.

7. The order of business shall be as follows unless amended by the Chair:

I. ORGANIZATIONAL BUSINESS
   1. Call to Order/Roll Call/Pledge of Allegiance
   2. Explanation by Chair
   3. Approval of Agenda

II. REQUIRED DUTIES
   1. Consent Agenda
   2. Public Hearing
   3. Other Business
III. DISCUSSION ITEMS
IV. VERBAL REPORTS AND ANNOUNCEMENTS
   1. Old Business
   2. Council Member Liaison Comments
   3. Planning Commission Comments
   4. Staff Liaison Comments
V. ADJOURNMENT

8. The following statement shall be printed on all agendas and shall be read by the Chair preceding public hearings during regular sessions of the Commission.

> *Please be advised that the public hearings are recorded and broadcast live on cable television and streamed over the internet at brooklynpark.org. The audio system will not pick up comments from the seating area. If you want to be heard and made a part of the public record, please go to the podium, speak into the microphone, stating your full name and address. Please sign the public hearing log book on the table near the entrance to ensure accuracy of name and address in the public record. Please note that the agenda for tonight's meeting indicates that the Commission Chair has the prerogative to invoke a time limit for speakers during any public hearing in the interest of maintaining focus and the effective use of time. Thank you in advance for your cooperation.*
>
> *The Planning Commission consists of 11 resident-volunteer members, two of which are young adult members, appointed by the City Council to advise the City Council on planning and land use issues.* ~~*The Planning Commission consists of nine resident-volunteer members appointed by the City Council to advise the City Council on planning and land use issues.*~~ *The Commission discusses and evaluates development proposals based on zoning regulations and comprehensive plan policies. The Planning Commission vote is only a recommendation that is forwarded to the City Council for official and final action.*

9. All recommendations shall be sent to the City Council by means of written minutes and shall include the record of the division of votes on each recommendation and the reasoning for the action.

10. Minutes of the meetings shall be recorded and kept by the Planning Staff.

11. All meetings shall be public.

12. Any resolution or motion, except motion to adjourn, postpone, reconsider, table, or call the previous question, shall be reduced to writing if requested by the Chair.

13. Any resolution or motion may be withdrawn at any time before action is taken on it.

14. When a question is under debate, no other motion shall be entertained except to table, or to call for the question, act on the question, postpone, refer to committee or amend. Motions shall take precedence in that order, and the first two shall be without debate.

15. All motions shall be carried by a majority vote of the members present except call for the question. Any member of the Commission may call for a roll call vote on any issue.

16. Motions can only be made by members recognized by the Chair.

17. Speaking without recognition of the Chair shall be cause for another member to call "point of order" and the member speaking out of turn must relinquish the floor.

18. "Call for the question" or "previous question" is a motion and must be seconded. It is not debatable and must be voted upon immediately. A 2/3 majority is necessary to call the previous question. If the 2/3 majority is given, the motion or question on the floor must be immediately put to a vote without debate except for a motion to table.

19. "Question" is not a motion but only an indication to the Chair that the person making this statement is ready to have the motion or question put to a vote.

20. The Chair may direct that a motion be divided if requested by a member.

21. No member may enter into the general discussion a second time on the same matter until all members wishing to express an opinion have been heard. Members must limit their remarks to the subject matter being discussed and shall not be repetitious. The speaking order shall be at the discretion of the Chair; however, all members shall be allowed a turn to speak.

22. Members of the commission are expected to faithfully participate in the meetings or other activities of the commission to which they have been appointed. A commission member shall notify the staff liaison or commission chair if they are unable to attend a meeting prior to the start of the meeting.

23. Any member who is absent for two consecutive meetings without notification (unexcused absence) to the Staff Liaison or absent 25% of the meetings, may be subject to removal by a majority of the City Council. These rules shall not be interpreted to imply automatic removal upon meeting a threshold listed above. The commission will retain the right to consider any special circumstances a member may wish to present.

24. The Commission may appoint a subcommittee and/or task force as they deem necessary to facilitate research for the commission. The members serve in an advisory capacity only to the commission. Subcommittees or task forces shall not contain a quorum of the commission

25. Any member having a direct or indirect financial and/or substantial personal interest in an individual action under consideration by the Commission shall state such if not excuse themselves from the Commission and not vote on that particular matter. All Commissioners shall abide by the Planning Commission's Code of Ethics.

26. These rules shall not be repealed, waived or amended except by a majority vote of the Commission only after notice has been given at a previous meeting.

27 Any rule of order not covered by these bylaws shall be governed by Robert's Rule of Order of Standard Parliamentary Procedure.

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Planning Commission
2024 Bylaws

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Commission recommendations on items to be considered by the Council.

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C. The Chair shall have prerogative to cancel or postpone any regularly scheduled Meetings.

D. The Chair shall have the prerogative to invoke a time limit for speakers during any public hearing in the interest of maintaining focus and the effective use of time.

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F. If a public hearing is reasonably anticipated to last under an hour, the work session may be moved from the fourth Wednesday to the second Wednesday

following the public hearing at the discretion of the Chair.

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The officers elected shall begin to serve their term the following April.

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B. Prior to a meeting a member may be excused from an individual meeting for reasons of illness, work, or out-of-town trips.

5. If the Chair or Vice-Chair resigns his/her appointment between the regular election cycle, then the remaining officers shall move up in rank and an election shall be held for the General Officer position.

6. The Chair shall call the meeting to order and the General Officer shall call the roll and announce a quorum. In the absence of the General Officer, the Chair shall appoint a General Officer pro tem.

7. The order of business shall be as follows unless amended by the Chair:

I. ORGANIZATIONAL BUSINESS
   1. Call to Order/Roll Call/Pledge of Allegiance
   2. Explanation by Chair
   3. Approval of Agenda

II. REQUIRED DUTIES
   1. Consent Agenda
   2. Public Hearing
   3. Other Business

III. DISCUSSION ITEMS

IV. VERBAL REPORTS AND ANNOUNCEMENTS
   1. Old Business
   2. Council Member Liaison Comments
   3. Planning Commission Comments
   4. Staff Liaison Comments

V. ADJOURNMENT

8. The following statement shall be printed on all agendas and shall be read by the Chair preceding public hearings during regular sessions of the Commission.

> *Please be advised that the public hearings are recorded and broadcast live on cable television and streamed over the internet at brooklynpark.org. The audio system will not pick up comments from the seating area. If you want to be heard and made a part of the public record, please go to the podium, speak into the microphone, stating your full name and address. Please sign the public hearing log book on the table near the entrance to ensure accuracy of name and address in the public record. Please note that the agenda for tonight's meeting indicates that the Commission Chair has the prerogative to invoke a time limit for speakers during any public hearing in the interest of maintaining focus and the effective use of time. Thank you in advance for your cooperation.*
>
> *The Planning Commission consists of 11 resident-volunteer members, two of which are young adult members, appointed by the City Council to advise the City Council on planning and land use issues. The Commission discusses and evaluates development proposals based on zoning regulations and comprehensive plan policies. The Planning Commission vote is only a recommendation that is forwarded to the City Council for official and final action.*

9. All recommendations shall be sent to the City Council by means of written minutes and shall include the record of the division of votes on each recommendation and the reasoning for the action.

10. Minutes of the meetings shall be recorded and kept by the Planning Staff.

11. All meetings shall be public.

12. Any resolution or motion, except motion to adjourn, postpone, reconsider, table, or call the previous question, shall be reduced to writing if requested by the Chair.

13. Any resolution or motion may be withdrawn at any time before action is taken on it.

14. When a question is under debate, no other motion shall be entertained except to table, or to call for the question, act on the question, postpone, refer to committee or amend. Motions shall take precedence in that order, and the first two shall be without debate.

15. All motions shall be carried by a majority vote of the members present except call for the question. Any member of the Commission may call for a roll call vote on any issue.

16. Motions can only be made by members recognized by the Chair.

17. Speaking without recognition of the Chair shall be cause for another member to call "point of order" and the member speaking out of turn must relinquish the floor.

18. "Call for the question" or "previous question" is a motion and must be seconded. It is not debatable and must be voted upon immediately. A 2/3 majority is necessary to call the previous question. If the 2/3 majority is given, the motion or question on the floor must be immediately put to a vote without debate except for a motion to table.

19. "Question" is not a motion but only an indication to the Chair that the person making this statement is ready to have the motion or question put to a vote.

20. The Chair may direct that a motion be divided if requested by a member.

21. No member may enter into the general discussion a second time on the same matter until all members wishing to express an opinion have been heard. Members must limit their remarks to the subject matter being discussed and shall not be repetitious. The speaking order shall be at the discretion of the Chair; however, all members shall be allowed a turn to speak.

22. Members of the commission are expected to faithfully participate in the meetings or other activities of the commission to which they have been appointed. A commission member shall notify the staff liaison or commission chair if they are unable to attend a meeting prior to the start of the meeting.

23. Any member who is absent for two consecutive meetings without notification (unexcused absence) to the Staff Liaison or absent 25% of the meetings, may be subject to removal by a majority of the City Council. These rules shall not be interpreted to imply automatic removal upon meeting a threshold listed above. The commission will retain the right to consider any special circumstances a member may wish to present.

24. The Commission may appoint a subcommittee and/or task force as they deem necessary to facilitate research for the commission. The members serve in an advisory capacity only to the commission. Subcommittees or task forces shall not contain a quorum of the commission

25. Any member having a direct or indirect financial and/or substantial personal interest in an individual action under consideration by the Commission shall state such if not excuse themselves from the Commission and not vote on that particular matter. All Commissioners shall abide by the Planning Commission's Code of Ethics.

26. These rules shall not be repealed, waived or amended except by a majority vote of the Commission only after notice has been given at a previous meeting.

27 Any rule of order not covered by these bylaws shall be governed by Robert's Rule of Order of Standard Parliamentary Procedure.

City of Brooklyn Park
Planning Commission Staff Report

Agenda Item:	5.1	**Meeting Date:**	February 14, 2024
Agenda Section:	Public Hearing	**Originating Department:**	Community Development
Resolution:	X		
Ordinance:		**Prepared By:**	Erin McDermott, Associate Planner
Attachments:	3	**Presented By:**	Erin McDermott, Associate Planner
Item:	**JJ's Fish & Chicken** – Planning Case #23-120 Site Plan Review for an addition to an existing restaurant on a property zoned B2 – Neighborhood Retail Business.		

Proposed Actions:

MOTION _____ SECOND _____ TO RECOMMEND APPROVAL OF SITE PLAN REVIEW FOR THE CONSTRUCTION OF AN ADDITION TO THE EXISTING RESTAURANT AT 7749 ZANE AVE N, SUBJECT TO CONDITIONS IN THE DRAFT RESOLUTION.

Summary:

This request is for the construction of an addition to the existing restaurant located at 7749 Zane Ave N. This addition will include a walk-up patio to serve pedestrian customers as well as customers to be seated inside the restaurant.

The existing structure on the property was constructed in 1962 as a Dairy Queen. At the time of development the Village of Brooklyn Park did not have a zoning ordinance in place.

Land Use Plan	Neighborhood Mixed Use
Current Zoning	B2 – Neighborhood Retail Business
Proposed Zoning	No proposed change
Site Area	0.83 acres
Conforms to	
Land Use Plan	Yes
Zoning Code	Yes
Subdivision Ordinance	Yes
Notification	Legal notice was published in the Sun Post, 55 Notices were mailed to properties within 500 feet, Proposed Development Sign was placed on the property, A Neighborhood email was sent to the Shingle Creek neighborhood.
60- and 120- Days (§15.99)	February 12, 2024; April 12, 2024

Previous Approvals:

In 1996 a CUP was issued to remove excess asphalt to reconfigure parking for this property and other adjacent properties to allow for internal circulation and to modify landscaping requirements for this site. This was further amended in 1998.

Current Conditions:

This site contains a 946 square foot restaurant that is currently vacant.

Land Use/Zoning (and Overlay):

This property is zoned B2- Neighborhood Retail Business and is guided Neighborhood Mixed Use by the 2040 Comprehensive Plan. Class I restaurants are a permitted use within the B2 zoning district, and this conforms to the Comprehensive Plan. This building was constructed prior to the adoption of the Brooklyn Park Zoning Ordinance, and the structure is considered legally nonconforming solely in the setback from the public rights-of-way. The nonconformity section of the Zoning Ordinance stipulates that nonconforming structures cannot be enlarged unless the expansion or alteration of buildings found to be non-conforming only by reason of height, setback or lot area may be permitted provided the structural non-conformity is not increased and the expansion complies with the performance standards of this chapter. (§152.054(A)(1)) As the only nonconformity of this structure is due to the setback, the expansion of this structure is permissible.

Proposed Development:

The applicant is proposing a 10ft by 40ft addition along the south side of the existing restaurant for additional cooking space, interior seating and a walk up window for outdoor service.

Site Plan Review:

Site plans must be reviewed against the evaluation criteria required by the Code (§ 152.033).

Lighting:

The current lighting complies with the lighting plan approved by CUP #96-164.55, which is still compliant with the zoning requirements for lighting in this zoning district.

Pedestrian Circulation:

The pedestrian circulation existing on site meets the zoning requirements. Section 152.132 states that sidewalks must be provided within all developments except single- or two- family residential in locations that provide convenient, safe pedestrian access as determined by the city between principal uses and must be as direct as possible to minimize distance and other impediments to walking. This site is served by sidewalk on both the north and east property lines adjacent to 78th and Zane avenues. The existing patio also provides access for pedestrians to the entrance of the building to the south of the structure.

Parking:

There are 36 parking spaces currently on site. Zoning regulations require 1 parking space for every 40 square feet of gross floor area of dining, and 1 parking space for every 80 square feet of kitchen area. The proposed site plan will have 33 parking spaces, which exceeds the 25 parking spaces required by the Zoning Ordinance.

Enclosures and Screening:

The proposed site has an existing waste enclosure which meets screening requirements for waste. The existing structure has a legally non-conforming unscreened rooftop HVAC unit. All rooftop HVAC units that are placed in different locations from the existing, or new rooftop HVAC units are required to meet screening requirements.

Landscaping:

Landscaping on this site complies with the approved landscaping plan as approved by CUP #96-164.55. The site is landscaped with street trees along Zane Avenue, with shrubs and building perimeter landscaping that meet the requirements established in the Zoning Code.

Architectural Standards:

The proposed addition matches the existing structure and is composed of brick and glass. Both brick and glazing are considered Class I materials, and the proposed addition complies with architectural requirements.

Roadways:

The site is located on the corner of 78th and Zane avenues, with two access points on 78th Avenue and one shared entrance on Zane Avenue.

Grading and Drainage:

There are no proposed changes to grading or drainage on the site.

Utilities:

The existing structure is already serviced by utilities, and the expansion of this restaurant can be supported.

The required findings of § 152.033 have been addressed and Staff recommends approval of the Site Plan Review.

Conditions of Approval:

Staff recommends the adoption of Resolution 2024 - ___ subject to the following conditions as listed in Section 4 of the resolution:

Staff Recommendation:

Staff recommends Planning Commission recommend approval of the resolutions approving the Site Plan Review for the construction of an addition to an existing restaurant at 7749 Zane Avenue subject to the conditions as written in the attached resolution.

Alternatives to Consider:

1. Recommend approval of the site plan as presented.
2. Recommend approval of the site plan with modifications.
3. Recommend denial the proposal based on certain findings.

Budgetary/Fiscal Issues:

There are no budgetary or fiscal impacts anticipated by this application.

Attachments:

A. DRAFT SITE PLAN RESOLUTION
B. LOCATION MAP
C. PLAN SET

RESOLUTION #2024-

RESOLUTION APPROVING A SITE PLAN REVIEW FOR THE CONSTRUCTION OF AN ADDITION TO AN EXISTING RESTAURANT AT 7749 ZANE AVENUE.

Planning Commission File #23-120

WHEREAS, an application has been made by JDA Design Architects, Inc. on behalf of Mohammad Hussain for a Site Plan Review under the provisions of the City Code on properties legally described as:

Lot 3, Block 1 of Rittinger Park, Hennepin County, Minnesota

WHEREAS, the zoning of the property is B2 – Neighborhood Retail Business –in which Class I Restaurants are an approved use; and

WHEREAS, the effect of the proposed use upon the health, safety, and welfare of surrounding lands, existing and anticipated traffic conditions, and its effect on the neighborhood have been considered; and

WHEREAS, the matter has been referred to the Planning Commission who held the public hearing on February 14, 2024.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Brooklyn Park:

The Site Plan Review for the construction of an addition to the existing restaurant at 7749 Zane Avenue is hereby approved with the following conditions:

1.00 DRAWINGS

1.01 Site, utility, landscaping, and grading plans for both properties on file in the City Clerk's office dated October 27, 2023 are approved, subject to conditions listed below.

1.02 Building elevations for the offices and warehouse facilities dated October 27, 2023 are approved to proceed to building permit, subject to conditions listed below.

2.00 BONDS, ESCROWS AND DIRECT PAYMENTS

2.01 A Development Contract and bonding shall be required as a development bond or letter of credit in the amount of **$**_____, a cash bond in the amount of **$**_____, and a developer's escrow in the amount of **$**_____ as required by Chapter 152. The developer's escrow must be posted with the City to cover engineering, legal and administrative costs incurred by the City. If this account becomes deficient, it shall be the developer's responsibility to deposit additional funds. This must be done before final bonding obligations are complete.

3.00 REQUIRED DOCUMENTS

3.01 All utility construction, drainage, grading and development plans must be approved by the City Engineer prior to receiving a building permit.

4.00 GENERAL CONDITIONS

4.01 It shall be the developer's responsibility to keep active and up to date the developer's contract and financial surety (Letter of Credit, bonds, etc.). These documents must remain active until the developer has been released from any further obligation by City Council motion received in writing from the Engineering Department.

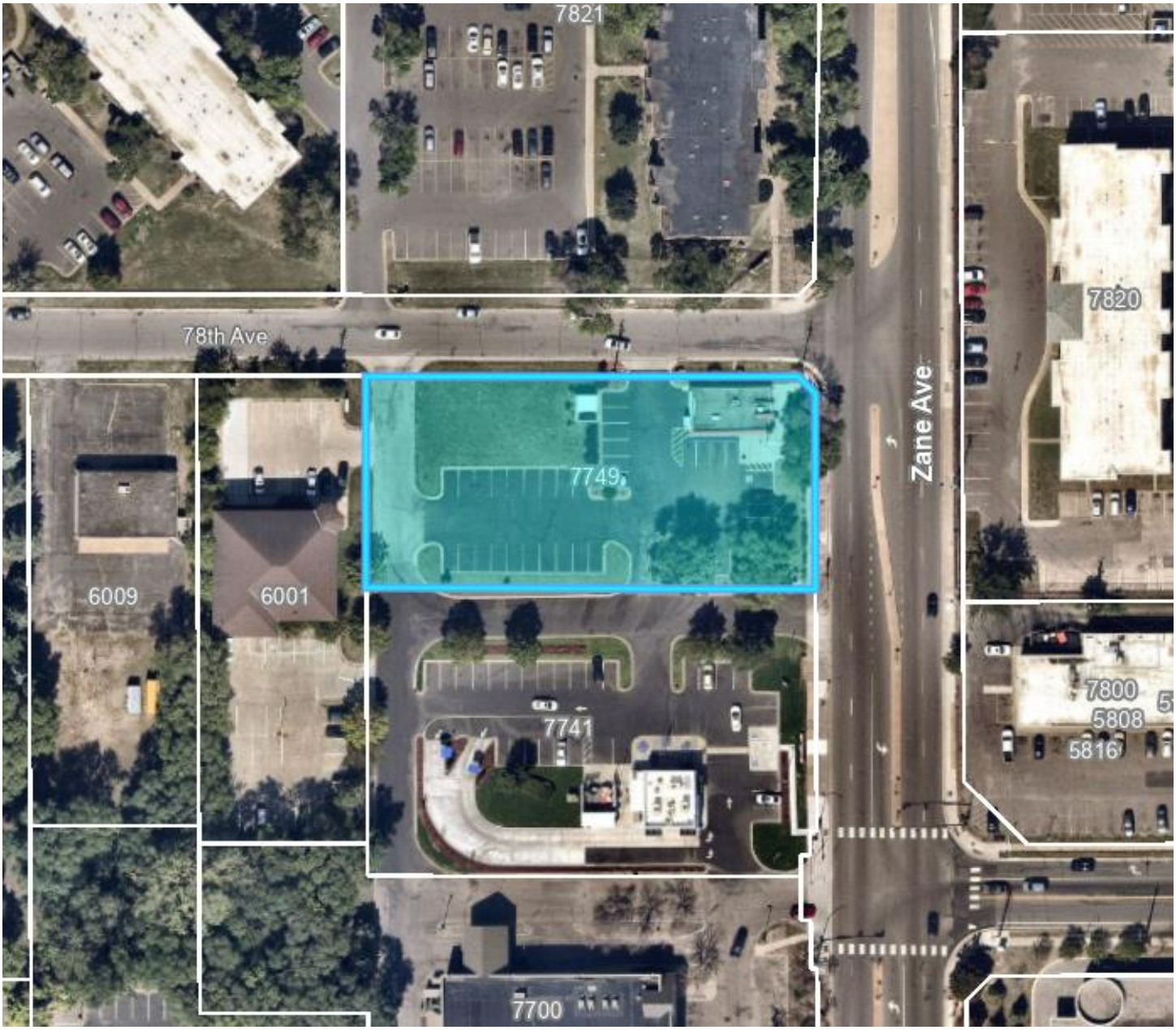
4.02 Before final bonding obligations are released, a certificate signed by a registered engineer must be provided. This certificate will state that all final lot and building grades are in conformance to drainage development plan(s) approved by the City Engineer.

4.03 No burying of construction debris shall be permitted on the site.

4.04 Dust control and erosion measures must be in place to prevent for dust and erosion including, but not limited to, daily watering, silt fences, and seeding. The City Engineer may impose measures to reduce dust and run-off.

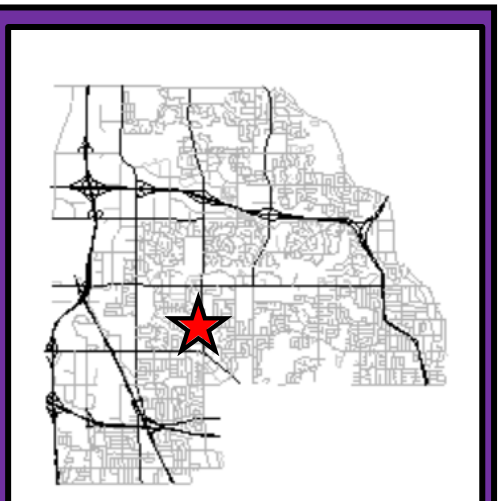
4.05 Adequate dumpsters must be on site during construction. When full, they must be emptied immediately or replaced with an empty dumpster.

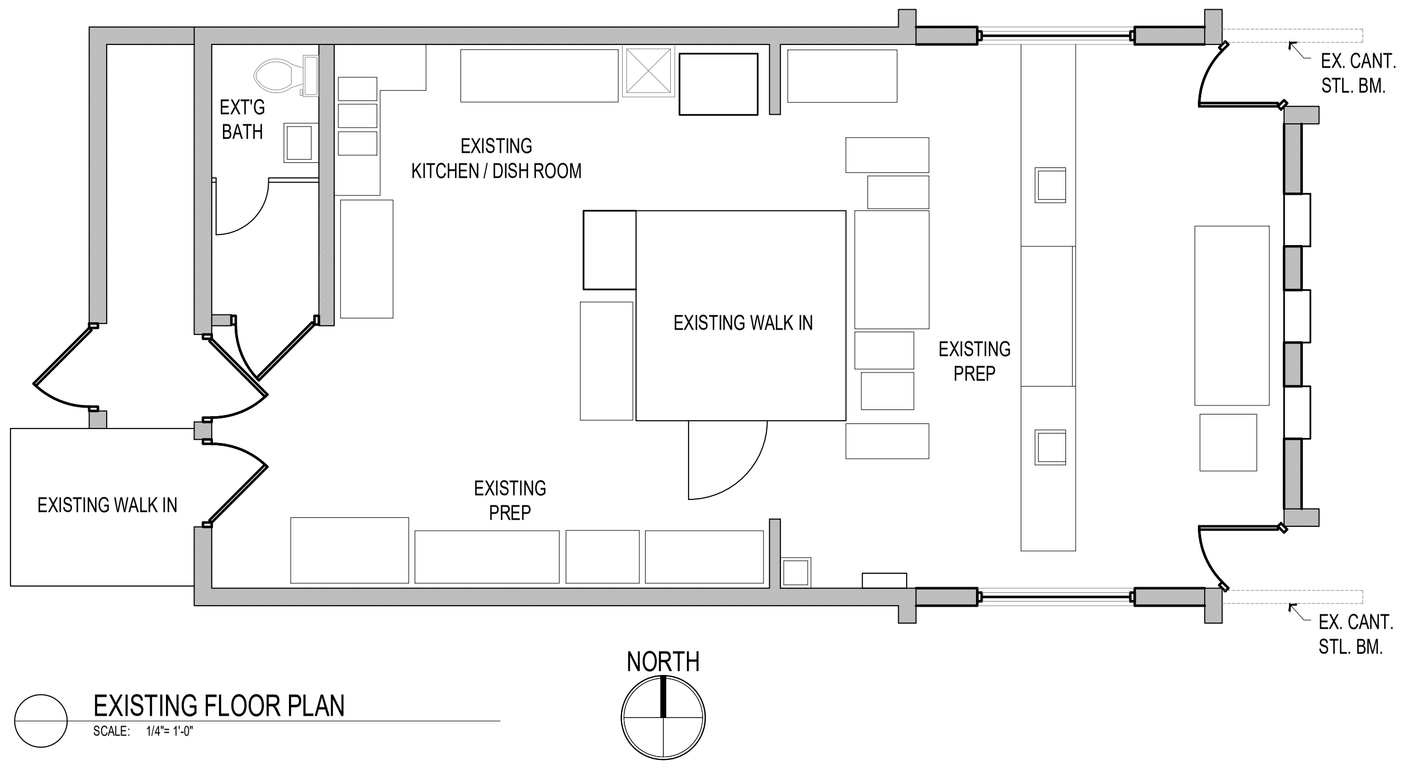
4.06 Signs must conform to the requirements of Chapter 150. The sign plans will be approved by staff to verify code compliance at time of building permit.



Site Plan Review for Existing Restaurant Expansion
Case #23-120 – 7749 Zane Ave N
Area of Request (August 2023 Air Photo)
7749 Zane Ave N

Brooklyn Park

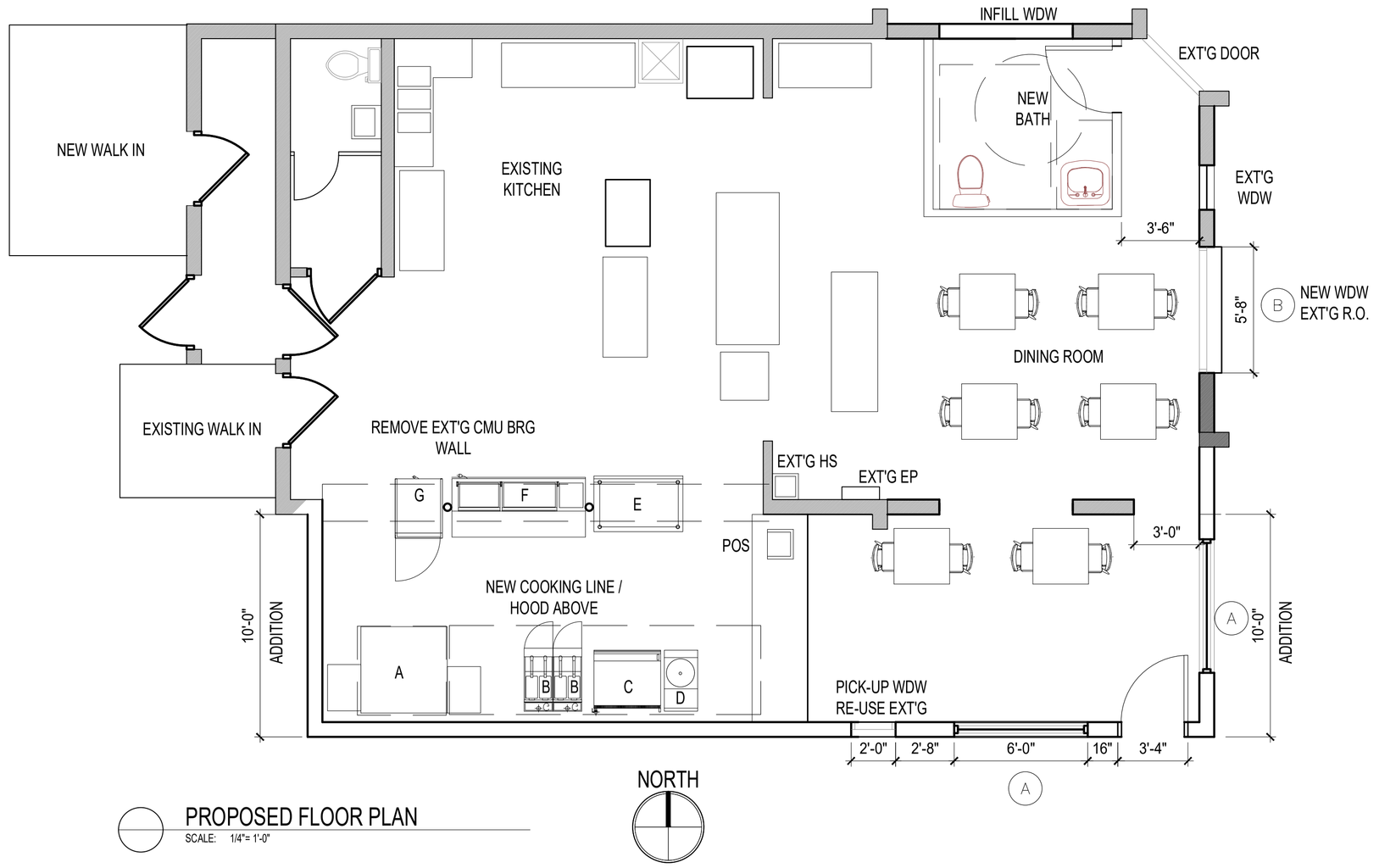




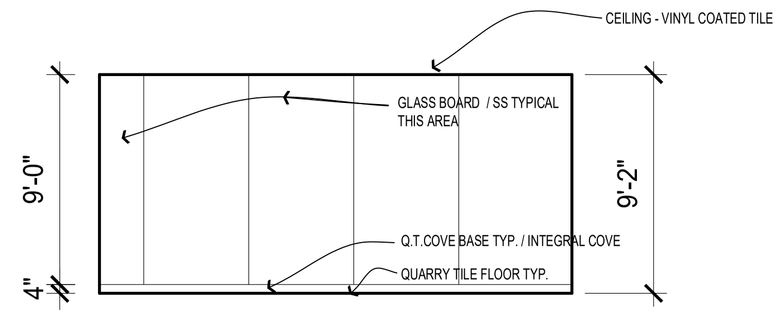
EXISTING FLOOR PLAN
SCALE: 1/4"= 1'-0"

EQUIPMENT LIST

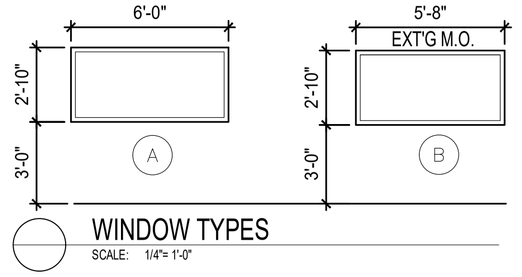
A	PIZZA OVEN
B	FRYERS - 2
C	36" GRIDDLE
D	18" GYRO
E	S.S. WORK TABLE
F	SANDWICH PREP
G	REACH IN
H	
I	
J	
K	
L	
M	
N	



PROPOSED FLOOR PLAN
SCALE: 1/4"= 1'-0"



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



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

JDA
DESIGN ARCHITECTS
Minnetonka
Minnesota 55343
Telephone: 612.817.0050
www.jdadesign.com

CONSULTANTS:

JJ Fish & Chicken

7749 Zane Avenue North
Brooklyn Park,Minnesota

CERTIFICATION:
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly

under the laws of the State of Minnesota.

signature date

name registration number

REVISION HISTORY:

description date

ISSUED FOR:
DESIGN REVIEW

ISSUE DATE:
OCTOBER 27, 2023

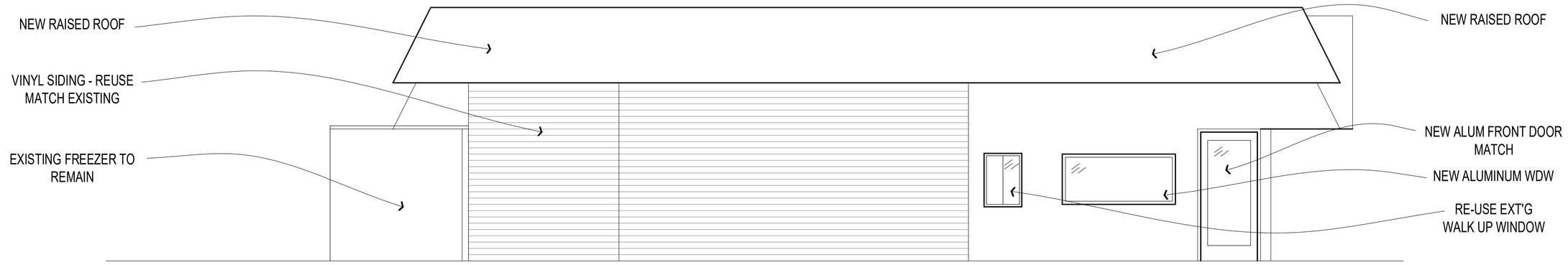
DRAWN BY: CLP/JDA
CHECKED BY: JDA

SHEET TITLE:
REMODELED FLOOR PLAN

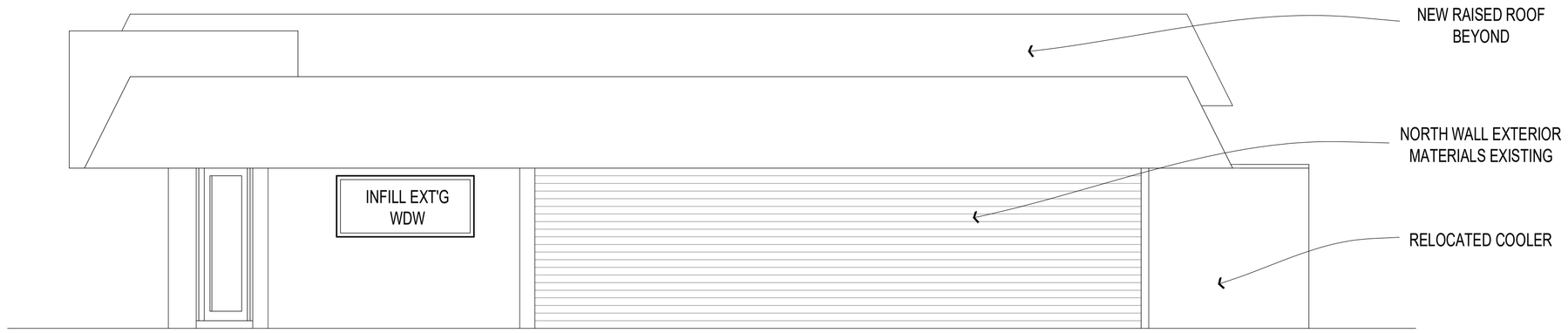
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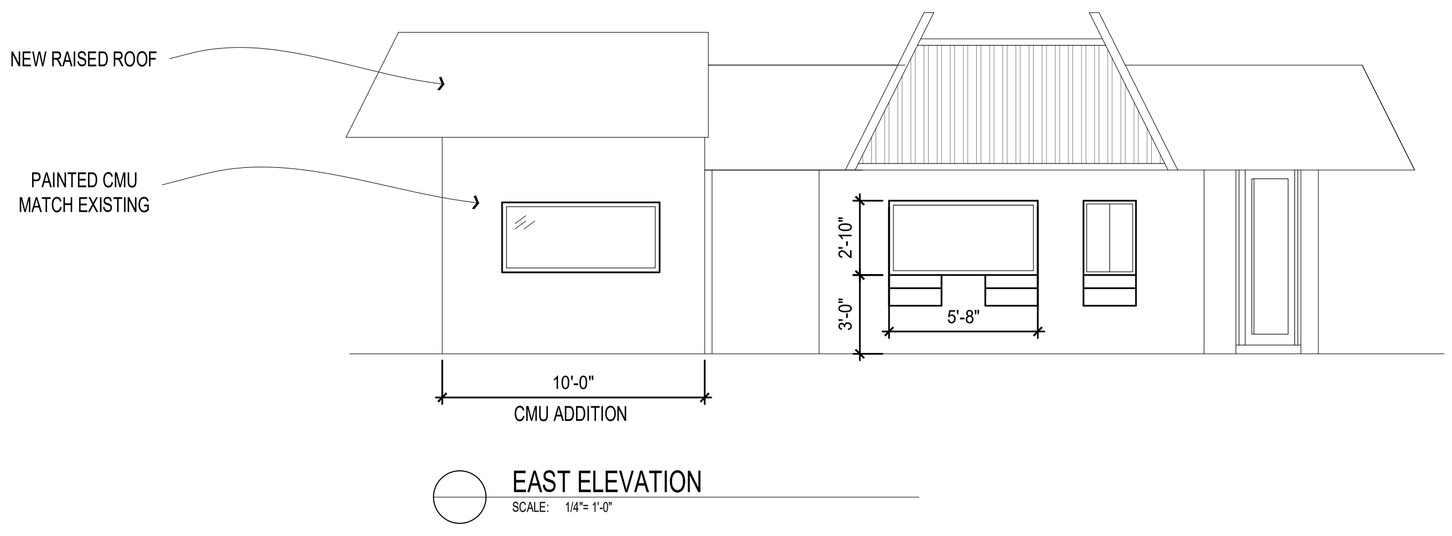
5.1C - PLAN SET



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



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



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

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description	date

ISSUED FOR:
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OCTOBER 27, 2023

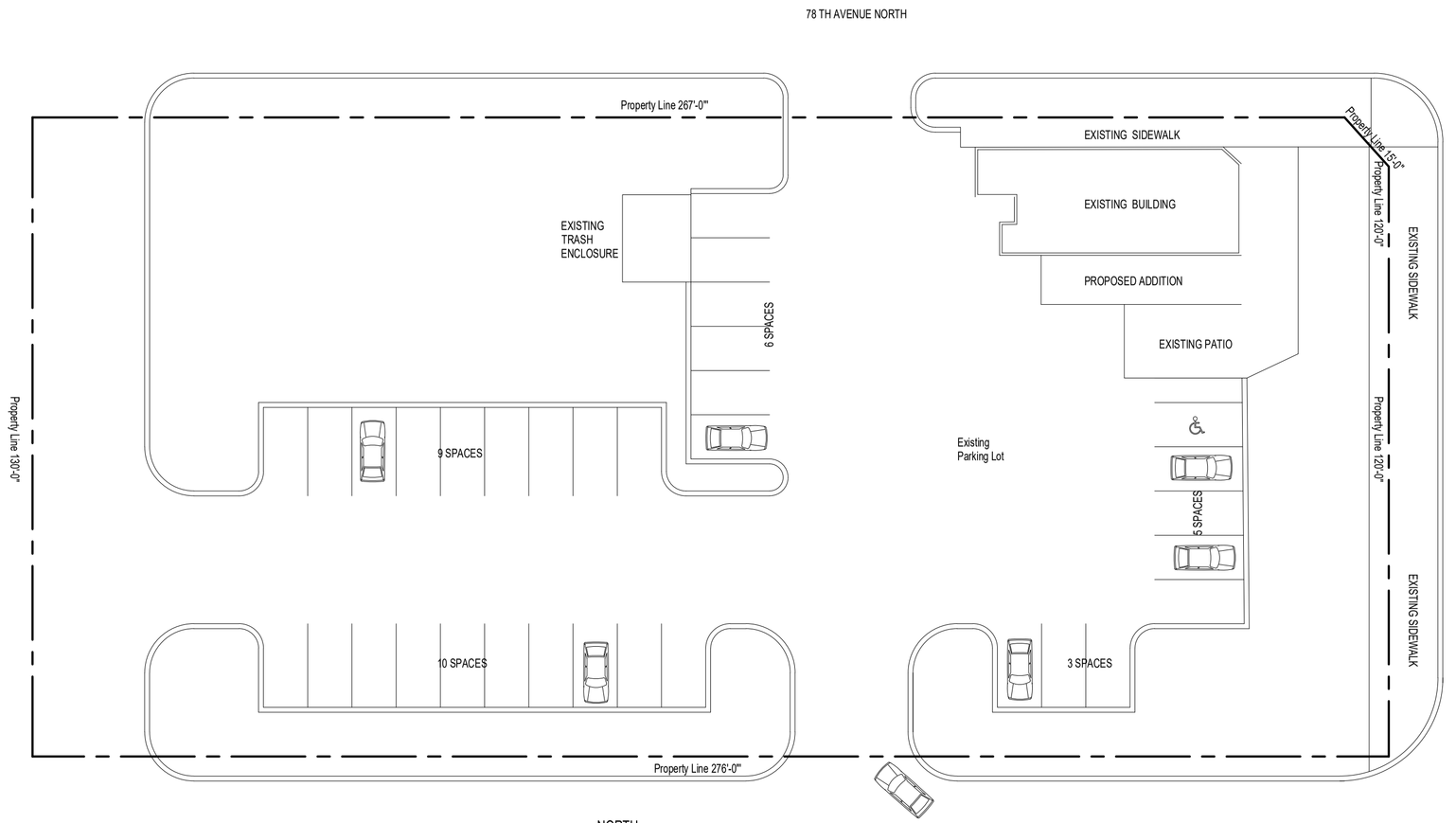
DRAWN BY: CLP/JDA
CHECKED BY: JDA

SHEET TITLE:
EXTERIOR ELEVATIONS

SHEET NUMBER:
A2.0

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5.1C - PLAN SET



NORTH

NOTE:
INFORMATION ON THIS SITE PLAN WAS TAKEN FROM HENNEPIN COUNTY PROPERTY INFORMATION SERVICES

1 / S1.0 EXISTING / PROPOSED SITE PLAN
SCALE: 1"=20'-0"

JDA
DESIGN ARCHITECTS
Minnetonka
Minnesota 55343
Telephone: 612.817.0050
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signature date

name registration number

REVISION HISTORY:

description	date

ISSUED FOR:
DESIGN REVIEW

ISSUE DATE:
October 27, 2023

DRAWN BY: CLP/JDA
CHECKED BY: JDA

SHEET TITLE:
EXISTING PROPOSED SITE PLAN

SHEET NUMBER:
S1.0

© JDA DESIGN ARCHITECTS

5.1C - PLAN SET

STRUCTURAL NOTES

Unless noted otherwise on the plans and/or in the details, these notes shall apply. If there are discrepancies between the plans/details and these notes, the contractor must conform to the more stringent requirements, unless clarified with the Structural Engineer of Record (SER) prior to work.

MATERIAL STRENGTHS

Structural Steel
- HSS Rectangular and Square – ASTM A500 Gr. B, F_y = 46 ksi; or ASTM A1085
- Pipe – ASTM A53 Gr. B, F_y = 35 ksi
- W shapes – ASTM A992, F_y = 50 ksi
- Misc. structural steel – ASTM A36, F_y = 36 ksi

Structural Steel Fasteners
- Connection bolts – ASTM F3125, F_u = 120 ksi, Type 1
- Anchor rods – ASTM F1554, Gr. 36, F_y = 36 ksi
- Threaded rods – ASTM A36, F_y = 36 ksi

Reinforcing Steel
- Deformed Bars – ASTM A615, Gr. 60, F_y = 60 ksi
- Masonry Joint Reinforcing – ASTM A951, F_y = 70 ksi
- Epoxy Coating for Reinforcing Steel – ASTM A775

Concrete
- f'_c = compressive strength at 28 days
  - 4,000 psi unless noted otherwise
  - 5,000 psi for exterior slabs and other elements exposed to freeze/thaw
    - Mix shall meet Exposure Class F3 and C2 per ACI 318
  - 3,000 psi for footings
  - 3,000 psi for masonry corefill

Masonry
- Concrete Masonry Units – ASTM C90
- f'_m = 2,000 psi (net area compressive strength of masonry)

Structural Lumber
- 2x lumber - #2 Hem-Fir or Spruce Pine Fir (SPF graded by NLGA)
- Treated lumber - #2 Southern Yellow Pine or equal

DESIGN LOADS

Risk Category	II
Roof	
Dead load	25 psf
Live load	20 psf
Snow load	
Ground snow, p_g	50 psf
Flat roof snow load, p_f	42 psf
C_e = 1.0, C_t = 1.2, I_s = 1.0, C_s = 1.0	
Roof top units	
See mechanical & notes below	
Rain intensity, i	7.20 in/hr (15 min)
	3.50 in/hr (60 min)
Wind	
V_{ult}	110 mph (3 second gust)
V_{asd}	85 mph (3 second gust)
Exposure Category	B
Internal pressure coefficient (GC_{pi})	±0.18
Component & Cladding design pressure	±15 psf (Service Load, Field)
	±30 psf (Service Load, within 5 ft of building corners)

DESIGN CODES

Minnesota Building Code (2020)
Minnesota Conservation Code for Existing Buildings (2020)

REFERENCE CODES

International Building Code (IBC-2018)
International Existing Building Code (IEBC-2018)
American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI 7-16)
Specification for Structural Steel Buildings (AISC 360-16)
American Welding Society – Structural Welding Code – Steel (AWS D1.1-20, D1.3-18, D1.4-18)
American Concrete Institute – Building Code Requirements for Structural Concrete – (ACI 318-14)
The Masonry Society – Building Code and Specification for Masonry Structures – (TMS 402/602-16)
American Concrete Institute – Specification for Tolerances for Concrete Construction and Materials (ACI 117-10)
American Forest & Paper Association – National Design Specifications for Wood Construction with 2018 Supplement (ANSI/AWC – NDS-2018)

GENERAL NOTES

The contractor is solely responsible for site safety including all temporary precautionary measures and safety programs. Site observation visits by the SER do not include review of the contractor's safety precautions.

SUBMITTALS

Submit all submittals for all materials and/or products in a given system at one time.
The contractor shall review and stamp all submittals prior to the SER's review.
Stamp will include: Signature or initials certifying that all materials and/or products are in accordance with the requirements of the design documents.
Allow ten (10) business days for review and response for each submittal for review excluding delivery time to and from the Contractor.
When revised for resubmission, identify all changes made since previous submission.
SER shall not be responsible for delays caused by rejection of inadequate shop drawings.
Submittals not requested will not be recognized or processed.
All engineering design and associated calculations provided by others and submitted to the SER for review must bear a certification stamp and signature of a qualified professional engineer who is licensed in the state where the project is located.
The following items are to be issued as deferred submittals per 2020 Minnesota State Building Code Section 1300.0130:
- Cold-formed structural steel framing

All items issued as deferred submittals are to be issued a minimum of 30 days prior to installation and must not be installed until their design and submittal documents have been reviewed for general conformance to the drawings by the general contractor, the SER and the building official. A copy of the deferred submittal must be forwarded to the authority having jurisdiction (AHJ) after the SER has reviewed the documents and prior to the erection of the deferred submittal items. Deferred submittal items must not be installed until approved by the AHJ.

COORDINATION - ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL ITEMS

Contractor shall verify all dimensions and conditions on site with the plans before construction begins. All discrepancies must be reported immediately.
Location, dimensions and details of recesses, depressions, openings, and equipment supports must be verified by reference to architectural, civil, electrical, and mechanical drawings.

EXISTING CONDITIONS

Contractor shall verify all dimensions, elevations, and details of the existing structure where they affect the new structural work. Notify architect and SER if there are any deviations from the contract documents.
Contractor shall field verify dimensions and elevations prior to fabrication of structural members.
Remove and replace existing architectural, electrical, mechanical, structural, civil, or miscellaneous items as necessary.

SHORING

General Contractor shall be responsible for temporary shoring of the existing construction until the new construction is in place and properly anchored in final form.
Shoring loads for existing structure not shown in documents to be determined by an engineer licensed in the state in which the project is located.
Shoring must be designed and the final design must be submitted to SER per Submittal Section for review.

TEMPORARY BRACING

All structural members are designed for in-place loads. Contractor is responsible for bracing, without overstressing, all structural elements as required at all stages of construction until completion of this project.
Provide temporary lateral support for all walls until adequately braced by the permanent structure.
Provide required temporary bracing for structural steel until permanent bracing and walls are in place.

ROOF TOP EQUIPMENT/OPENINGS

Verify size and location of all openings with architectural and mechanical drawings.
Openings in floor and roof not shown on structural drawings must be placed between structural members.
The contractor shall provide sleeves through concrete slabs, joists, and beams for all plumbing.
For any mechanical equipment not shown, the total weight must not exceed 200 lbs without prior approval of the SER.
Provide mechanical unit locations, sizes, and weights to the SER. Do not place multiple roof top units on the same plank or joists without prior approval by the SER.

GENERAL SOIL NOTES

The structure has been designed using an assumed allowable soil bearing pressure of 2000 psf on virgin soil or compacted granular fill for footings.
A qualified geotechnical engineer shall confirm the assumed allowable soil bearing pressure in a geotechnical report, and the site must be prepared in accordance.
Any discrepancies in the assumed allowable soil bearing pressure must be reported immediately.
If verified conditions differ from assumed capacities, redesign of the foundation system, size and reinforcing of footings, walls and retaining walls may be required.
The structure must be located on the site as indicated in the geotechnical report. The geotechnical report recommendations are valid for a specific structure location and conditions.
If any of the following conditions of the structure change, notify the geotechnical engineer immediately: the structure location, design loads, grading, and/or the size of the structure.
Remove all top soil, un-compacted fill, and other poor soil from the construction site as determined by the geotechnical engineer.
Slope the site to drain away from the building.
The contractor shall verify the location of existing underground utilities, tanks and other obstacles prior to beginning excavation.

CONCRETE

Provide ready-mixed concrete per ASTM C94. Portland cement must be ASTM C150, Type I or ASTM C595, Type 1L, Portland-Limestone Cement. Use only one brand of cement throughout the work. Provide concrete aggregates meeting the requirements of ASTM C33.
Concrete mixes for exterior horizontal conditions shall contain no more than 25% fly ash, 50% slag cement, 10% silica fume, or 50% fly ash, slag cement, and silica fume combined as a proportion of all cementitious materials.
The maximum water-soluble chloride ion content in typical concrete mixes shall be limited to 0.30% as a percent mass of all cementitious materials. Chloride ion content shall be limited to 0.15% for exterior horizontal conditions and 0.06% for post-tensioned concrete.
Unless meeting the acceptance criteria in ASTM C94, water must be clean, free of deleterious amounts of acids, alkalis, or organic materials, and be considered potable.
Provide admixtures to reduce water content, provide air-entrainment, or alter the quality of the concrete to meet the job conditions. Admixtures must be indicated in the mix designs.
All concrete exposed to weather, freeze-thaw conditions or de-icing chemicals shall contain 6% ± 1.5% entrained air for mixes with 3/4" max aggregate size. Refer to ACI 318 for other aggregate sizes.
Slump at point of discharge shall be as follows:

Footings	3" - 4"
Slabs on grade	3" - 4"
Structural slabs	3" - 4"
Masonry grout	8" - 11"

Verify slump on site matches slump specified in the approved mix design by testing methods listed in ASTM C143.
Workability of the concrete must be maintained so that concrete will completely fill forms without voids and bond to reinforcing without separation of materials.
Mix and deliver concrete in accordance with ASTM C94. Cooled or heated water must be used in accordance with ACI 305 and 306. Ready mixed concrete must be transported to the site in watertight agitators or mixer trucks loaded not in excess of rated capacities. Discharge at the site must be within one hour after charging. Air-entraining and chemical admixtures, if approved, must be charged into mixer as a solution as recommended by the manufacturer.
Concrete must not be laid when the temperature of the outside air is below 40 degrees Fahrenheit unless approved methods are used during construction to prevent damage to the concrete. All materials used and surfaces built upon must be free of snow and ice.
Concrete placed during cold weather to conform to the recommendations of ACI 306R. For hot weather conditions, conform to the recommendations of ACI 305R.
Place concrete in accordance with ACI 304 "Guide for Measuring, Mixing, Transporting, and Placing Concrete". Use mechanical vibrating equipment for consolidation. Do not use vibrators to transport concrete in forms.
Protect fresh concrete from premature drying and excessively hot or cold temperatures while maintaining minimal moisture loss at a relatively constant temperature above 55 degrees Fahrenheit.
Provide wire, plastic, or precast concrete spacers, chairs, slab bolsters, support bars, etc. for support of reinforcing steel in proper position while placing concrete. Chairs/bolsters must be stable and resist tipping.
Concrete must not bear permanently on wood members.

FOOTINGS

Footings are to be formed cast-in-place concrete.
Wall footings to be 12" deep with a minimum projection of 4" each side reinforced with 2-#5 continuous bottom bars.
Provide 30 bar diameter lap at splices and full crossing lap at corners and intersections.
Footing elevations shown on plan are to the top of the footing.
Maintain minimum frost depth for all exterior footings. Frost depth is 42" typically and 60" at isolated, unheated spaces. Frost depth is measured from finished grade to the bottom of the footing.
Where the wall footing elevation changes, step the footing two units horizontal to one unit vertical. Footing reinforcing must be continuous through footing steps.
Cast dowels in footing for foundation walls, piers and columns above.
Dowels are to be the same size, and spacing as the vertical reinforcing of the wall, pier or column.
Dowels must extend to 3" clear of bottom of footing. Refer to details for hooked dowels where needed.

UNDERPINNED FOOTINGS

The contractor is responsible for underpinning of existing foundations where noted.
Provide temporary shoring as needed to support vertical loads.
Provide temporary bracing as needed to resist horizontal earth pressure and retain the building.
Contractor to retain an engineer as needed to design shoring and bracing.
Underpinning must be constructed by a company familiar with this type of work.
Underpinning designs must be submitted to SER for review, prior to construction.

CONCRETE SLABS

All slabs on grade to be 4" thick and reinforced with 3.0 pounds per cubic yard of synthetic macro fibers (ASTM C1116 Type III).
Construction and/or control joints should occur at a maximum of 10'-0" OC at exterior slabs on grade, and at a maximum of 12'-0" OC at interior slabs on grade.
Construction and/or control joints should be laid out in a rectangular pattern with long to short side ratio less than or equal to 1.5 and with no re-entrant corners.
Control joints for slabs on grade should be saw-cut as soon as concrete can accept it without raveling.
Do not cut control joints in structural slabs or topping slabs unless specifically directed.
All control/construction joints must be continuous and not staggered or offset.
Control joints must be cleaned and sealed for curing purposes as soon as possible.
Verify floor finishes and control/construction joint locations with owner and architect.

THICKENED SLAB ON GRADE

Where no footing or foundation wall is shown under a masonry wall, slabs under such walls must include a 16" wide x 8" deep thickened slab with 2 - #4 continuous bottom bars, placed 3" clear of bottom.

CONCRETE COVER ON REINFORCING

Footings	3" clear, bottom and sides
Structural Slabs	1" clear, top and bottom
Slab on Grade	Center reinforcing in slab

REINFORCED CONCRETE MASONRY WALLS

Hollow unit concrete masonry must be per ASTM C90.
Mortar must be per ASTM C270: Type S for below grade and exterior masonry; Type N for all interior above grade masonry.
All masonry units must be placed in running bond.
Provide special shapes for jambs, columns, pilasters, control joints, corners and lintels.
See plans for location and spacing of reinforcement in walls.
Locate reinforcement in cores with positioners.
Place at least (1) vertical reinforcing bar in wall corners.
When one bar is in a single core, place in center.
For #6 and smaller, vertical steel must be continuous with 48 diameter lap at all splices for reinforcement in center of wall, 72 diameter lap at all splices for reinforcement near face of wall or as scheduled for specific conditions.
Fill masonry core at vertical columns with grout vibrated in place.
Grout must be per ASTM C476 with a slump of 8" - 11" and tested per ASTM C143.
Wall heights must not exceed 5'-4" before placement of core grout unless cleanout holes are provided at the bottom of each maximum 5'-4" grout lift.
Provide ladder or truss style horizontal joint reinforcing, fabricated with galvanized minimum 9-gauge wire, placed every 2nd course (16" OC) in single wythe masonry walls.
Provide bond beam with 2 - #5 at all floor lines, roof lines and top of walls or as specified on drawings.
Provide corner bars with 2'-0" legs for each horizontal bar in all bond beams at corners and intersecting walls.
Provide full mortar bedded face shells and webs around all grouted cells for full bearing and to prevent leakage into adjacent cells.
Place control joints in the masonry walls above grade such that no straight run of wall exceeds the lesser of 25 feet or 1.5 times the height.
Place control joints in the masonry walls below grade such that no straight run of wall exceeds the lesser of 32 feet or 2.5 times the height.
Locate control joints at least 4'-0" from masonry wall pilasters and corners.
Bond beam reinforcing must be continuous through control joints.
See architectural plans for location and detail of wall control joints.

STRUCTURAL STEEL

Structural steel must be fabricated and erected according to the Code of Standard Practice for Steel Buildings and Bridges (AISC 303-16).
Structural steel supplier must supply all cap plates, bearing assemblies, base plates, stiffeners, splices and connections.
Non-shrink grout under base plates and bearing plates shall conform to ASTM C1107 and have a minimum compressive strength of 7,000 psi at 28 days.
All welding must match filler materials in accordance with the rules of the American Welding Society (AWS D1.1) Structural Welding Code.
All welders shall be certified by the rules of the American Welding Society.
Steel beams to have minimum 5/16" x 3/4 beam height web stiffeners each side at all bearing locations.
Field weld all steel beams to concrete or masonry bearing plates full length each face with 1/4" fillets.
Steel lintels to bear on masonry a minimum of 8" each end of the opening. Reinforce the masonry core under the lintel and first adjacent core full height with minimum 1 - #5 vertical reinforcing bar. Grout each core solid.
All structural steel below grade must be coated with bituminous paint.
All structural steel exposed to weather must be galvanized.
Galvanized structural steel must be hot-dipped per ASTM A123.
Modification of structural steel members in the field is not permitted without prior approval by the SER.

STRUCTURAL STEEL CONNECTIONS

Connections shown represent the finished connection condition. Temporary seats, plates and supports shall be removed by steel erector.
Refer to connection schedules for minimum connection requirements.
Substitution requests shall be submitted for approval prior to shop drawing submittal.
Typically provide bolted connections for field installation and welded or bolted shop connections.
Typical bolts are 3/4" diameter A325-N bolts in standard or short slotted holes.
Structural steel supplier must provide all components for OSHA requirements.

DIMENSION LUMBER

Design assumes lumber is free of significant splits and checks. Contractor must visually inspect lumber during installation.
All lumber must be grade stamped and provide the following information: grading agency, mill number or name, grade of lumber, species or species grouping or combination designation, rules under which graded, where applicable, and condition of seasoning at time of manufacture.
Lumber grading rules and wood species must conform to Voluntary Product Standard PS 20-10 as published by the Department of Commerce. Grading rules must be from an agency certified by the Board of Review of the American Lumber Standards Committee.
All lumber must be seasoned to a moisture content of 19% or less, with the indication of "S-Dry" on the grade stamp.
All lumber must be protected from the elements and stored on site per suppliers requirements.
Sill plates and all other lumber in contact with concrete or masonry, or within 8" of finished grade must be preservative treated wood.
Preservative treated wood must be in accordance with the American Wood Protection Association, Standard U1.
All fasteners and hangers in contact with treated lumber must be G185 hot dipped galvanized or equal.
Anchor sill plates to foundation wall with 5/8" diameter rods at 4'-0" OC maximum. Rods to extend 13" minimum into solidly grouted masonry foundation wall and 5" minimum into cast in place concrete foundation wall.
Attach each sill plate with a minimum of 2 anchors with one anchor located not more than 12" or less than 4 ½" from each end of the plate section.
At non-shear walls, provide USS standard cut flat round washers under sill plate anchors, slightly crushing plate. At shear walls, provide 0.229" x 3" square or larger washers under sill plate anchors and located within 1/2" of the structural sheathing. Square washers may be slotted up to 1-3/4" long and 3/16" wider than anchors when used in conjunction with a USS standard cut flat washer.
All walls must have a single bottom plate and double top plate.
Frame exterior walls with 2 x 6 studs @ 16" OC.
Frame interior non-load bearing walls with 2 x 4 studs @ 16" OC.
At typical openings, provide a Minimum of: 2 bearing (trimmer or jack) studs and 1 full-height king stud.
Beams and headers must be fully supported across the width of the member. Bear each end on all support studs or columns noted on plan with a minimum 3" bearing length.
Beams or headers made of multiple 2x plies with 1/2" spacer must be nailed together with 16d nails (.162" x 3 ½") at 16" OC along each edge, typical for each lumber ply.
Wood joists must bear the full width of supporting members (stud wall, beams, etc.)
Provide solid vertical blocking at all joist spaces below wood columns. Provide matching columns to foundation at lower levels below columns comprised of 3 or more studs.
Beams and joists not bearing on supporting members must be framed with prefabricated metal hangers.
Space joist bridging at a maximum of 8'-0" OC.
Minimum nailing to be in accordance with Table 2304.9.1 of IBC.
Lumber joists and studs shall not be notched without prior approval of the SER unless otherwise shown on the drawings.
All plywood and OSB must be installed per APA standards, including the use of construction adhesive for fastening to floor joists.
Performance requirements, adhesive bond performance, panel construction, workmanship, dimensions, tolerances, marking, and moisture content of Wood-based Structural-use Panels must conform to Voluntary Product Standard PS 2-10 published by the Department of Commerce.

WALL SHEATHING

See architectural drawings and structural shear wall plans for wall sheathing type.
Wood panel wall sheathing must be minimum 15/32" Performance Category panels rated per APA for the spacing of the supporting members. A minimum 32/16 span rating is recommended.
Wood panels must meet APA standard PS 1 or PS 2 and Exterior or Exposure 1 grade.
Fasten wood panel wall sheathing with 8d common nails (0.131" diameter x 2 1/2") spaced at 6" OC at supported edges and 12" OC at intermediate supports. Leave an 1/8" gap at all end and edge joints to allow for expansion. Stagger end joints of panels.
Galvanized 10d box nails may be substituted for 10d common nails for fastening wood sheathing.
Gypsum wallboard and gypsum sheathing must be a minimum of 1/2" thick fastened with 6d cooler or 0.0915" x 1 7/8" wallboard nails with 19/64" head at 7" OC to all framing members.
Panels must be continuous over two or more spans and the long panel dimension may be either perpendicular or parallel to supports.
Locate nails a minimum of 3/8" from edge of panel.
All edges must be blocked.
Refer to plan and notes for any special shear wall conditions.

ROOF SHEATHING

Roof sheathing must be minimum 23/32" Performance Category panels rated per APA for the spacing of the supporting members. A minimum 40/20 span rating is recommended. Provide panel clips, one between each support, for supports spaced greater than 16" OC.
Provide panels meeting APA standard PS 1 or PS 2 and Exterior or Exposure 1 grade.
Panels must be continuous over two or more spans and the long panel dimension must be perpendicular to supports.
Fasten roof sheathing with 8d common nails (0.131" diameter x 2 1/2") spaced at 6" OC at supported edges and 12" OC at intermediate supports.
Locate nails a minimum of 3/8" from edge of panel.
Leave an 1/8" gap at all end and edge joints to allow for expansion.
Design of roof sheathing assumes that the roof will be properly insulated and ventilated.
Refer to APA publication N335N "Proper Installation of APA Rated Sheathing for Roof Applications."

WOOD FASTENERS AND CONNECTORS

Nails shall conform to ASTM F1667 including supplement S1.
All nails are common type unless noted otherwise

Prefabricated steel connectors noted on drawings refer to Simpson Strong-Tie hangers, clips, post bases, hold downs, etc. with specified product number.
USP connectors may be submitted as a substitution to the SER for approval.
Install prefabricated metal connectors in strict accordance with the manufacturer's recommendations.

Structural Wood Screws (SWS) noted in the drawings refer to high-strength, self-tapping wood screws. The table below defines SWS by diameter with a list of acceptable manufacturer products. The following criteria apply:
- Minimum Yield Strength: 160,000 psi (carbon steel)
- Conforms to ASTM A510 and/or has values published by third-party testing such as ICC
- Powder-coated or otherwise treated for corrosion protection.
- Acceptable products by Size (length varies per manufacturer)

Type Noted	Acceptable Products
#12 SWS	FastenMaster TimberLOK, FastenMaster HeadLOK, Simpson SDWH
#14 SWS	FastenMaster LedgerLOK, FastenMaster FlatLOK, Simpson SDWS
Ledger SWS	FastenMaster FlatLOK 5", Simpson SDWS-22600DB, MiTek MSWH5

Install Structural Wood Screws per manufacturer's recommendations.
Install Ledger Structural Wood Screws within 3/16" of the centerline of wall studs or fasten ledger to blocking.
All substitute products for use as structural wood screws must be submitted to the SER for approval.

ADHESIVE/MECHANICAL ANCHORS

Adhesive and mechanical anchors must be provided and installed in strict accordance with the manufacturer's instructions and the design documents.
Refer to the special inspections table for inspection requirements.
All horizontal and upwardly inclined installations that resist sustained tension loads must be performed by certified adhesive anchor installers.
Provide anchor type and size as indicated on the drawings with length identification markings conforming to ICC ES AC01 or ICC ES AC193.
Concrete Screw Anchors are a single-use item. Do not remove and reinstall anchors nor install new anchors in previously used holes.
For exposed exterior applications, use anchoring systems with stainless steel, hot-dip galvanized, or mechanical galvanized (Class 55 min per ASTM B695) accessories.
Adhesive anchoring systems:
- Concrete:
  - Hilti HIT HY-200 (A or R)
  - Hilti HIT-RE 500 V3
- Masonry:
  - Hilti HIT HY-200 (A or R) for grouted CMU only
  - Hilti HIT HY-270

Mechanical anchoring systems
- Concrete and grouted CMU:
  - Hilti Kwik Bolt 1 or 3 or Simpson STRONG-BOLT 2 expansion anchor
  - Hilti Kwik HUS-EZ (CRC) or Simpson Titen HD screw anchor.

Alternate anchoring system may be submitted to the SER for approval. Reference drawings for additional information and requirements.

PRELIMINARY DRAWING
NOT FOR CONSTRUCTION

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MMY Project #23267

JJ's Chicken & Fish

7749 Zane Avenue North
Brooklyn Park, Minnesota

CERTIFICATION:
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly
LICENSED PROFESSIONAL ENGINEER
under the laws of the State of Minnesota.

signature | date

name: JORDAN J. HURST | registration number: 00000

REVISION HISTORY:

description	date

ISSUED FOR:
ABC

ISSUE DATE:

DRAWN BY: MAD | CHECKED BY: JJH

SHEET TITLE:
STRUCTURAL NOTES

SHEET NUMBER:
S0.0

© J D A DESIGN ARCHITECTS

5.1C - PLAN SET

SPECIAL INSPECTIONS

The contractor shall include in the bid the cost of all testing and inspections indicated on the plans and in the specifications, including special inspections required by the building code. The actual contracting of the inspection and testing services shall be in accordance with the division of responsibility dictated by the Minnesota Building Code.

IBC Section 1705 requires that in addition to the inspections required by Section 110, the owner shall employ one or more special inspectors who shall provide inspections during construction of certain types of work.

"Special Inspection" concerns work requiring observation and judgement and shall be performed by a structural engineer (or a designated person under the supervision of the engineer). "Testing" involves the analysis of materials in accordance with approved standards and shall be performed by an independent testing agency.

The contractor shall coordinate the testing and inspection services in accordance with the progress of the work. The contractor shall provide sufficient prior notice to the testing and/or inspection agency of the required work to allow proper scheduling of personnel. The cost of any retesting or additional inspections as a result of failed tests and rejected work shall be borne by the contractor.

This project requires a STRUCTURAL TESTING AND SPECIAL INSPECTION SCHEDULE, to be signed by the Owner, Contractor, Architect, Structural Engineer of Record, and Testing Agency. Refer to the program summary schedule for frequency of testing and inspections.

REQUIRED SPECIAL INSPECTIONS

DESCRIPTION OF WORK IBC SECTION 1705		INSPECTION YES	INSPECTION NO	TESTING YES	TESTING NO	N/A	REMARKS
1. Weld - Structural Steel	(1705.2)	●			●		1a, 1b, 1c, and 1d
2. Structural Steel Details	(1705.2.1)	●			●		2a
3. High Strength Bolting	(1705.2.1)	●			●		3a, 3b, 3c, and 3d
4. Concrete Construction	(1705.3)	●		●			4a, 4b, 4c, and 4d
5. Structural Masonry	(1705.4)	●		●			5a, 5b, and 5c
6. Wood Assemblies	(1705.5)	●			●		6a and 6b
7. Soils	(1705.6)		●	●			7a, 7b, and 7c
8. Driven Deep Foundations	(1705.7)					●	
9. Cast-in-place Deep Foundations	(1705.8)					●	
10. Helical Pile Foundations	(1705.9)					●	
11. Special Inspections for Wind Resistance	(1705.11)					●	
12. Sprayed Fire-Resistant Materials	(1705.14)					●	See architectural drawings
13. Mastic and Intumescent Fire-Resistant Materials	(1705.15)					●	See architectural drawings
14. Exterior Insulation and Finish Systems (EIFS)	(1705.16)					●	See architectural drawings
15. Fire Resistance Penetration and Joints	(1705.17)					●	See architectural drawings
16. Smoke Control	(1705.18)					●	See architectural drawings
17. Special Cases	(1705.1.1)					●	17a

SPECIAL INSPECTIONS WORK REQUIRED

Items marked with an asterisk " * " are conventional testing not strictly a part of Section 1705 but are required for adequate quality assurance and can be provided by the contractor. All other work must be provided by the owner as indicated by the MN State Building Code.

1. Welding - Structural Steel
- a.* Provide verification of Quality Control/Quality Assurance Program regarding fabrication process.
- b. Provide visual inspection of all field welding.
- c. Qualification of Welders prior to start of work.
- d. Provide periodic visual inspection of roof and floor deck welding. Review type and spacing of sidelap fasteners. Inspect all roof and floor deck areas prior to placement of roof insulation or other covering.

2. Structural Steel Details
- a. Provide visual inspection of structural steel details such as bracing, stiffening, member configuration, and proper construction of joint details at each connection.

3. High-strength Bolting
- a. Provide verification of Quality Control/Quality Assurance Program regarding fabrication process.
- b. Visual Inspection of all field bolting.
- c. Bolt designs are based on "bearing" type connections, verify that the connected materials have been drawn together properly.
- d. Provide periodic inspection of bolt installation method. Acceptable methods are turn of the nut, direct tension indicator, or twist-off bolt.

4. Concrete
- a.* Provide mix design in accordance with ACI requirements.
- b. Test concrete at the time of pouring for slump, air-entrainment, and temperature in accordance with the specifications.
- c. Make and test concrete cylinders for representative strength in accordance with the specifications.
- d. Design of concrete footing is based on design stress F'c = 2500 psi, therefore no special inspection required.

OR (CHOOSE ONE d., ABOVE OR BELOW, NOT BOTH)
- d. Provide periodic visual inspection of reinforcing:
  - I. Visual inspection of all pad footings prior to pour.
  - II. Visual inspection of 25% of continuous strip footings prior to pour.
  - III. Visual inspection of 50% of poured foundation wall reinforcing prior to pour.
  - IV. Visual inspection of 50% of slab on grade and topping over metal deck prior to pour.

5. Masonry - Level B Quality Assurance
- a. Design of masonry based on net area compressive strength of masonry = 2000 psi. Inspections may be performed in accordance with Table 1.19.2 in ACI 530-11.
- b. Provide letter of certification from the manufacturer of concrete masonry units and suppliers of mortar and grout, to assure compliance with the compressive strengths required.
- c. Inspection of masonry core grouting - (1) inspection prior to each grouting procedure.
  - I. Reinforcing size and spacing.
  - II. Grout pour height and cleanouts.
  - III. Hot weather or cold weather procedures.

6. Wood Assemblies
- a. Provide verification of Quality Control/Quality Assurance Program regarding fabrication process.
- b. Visually inspect framing layout and connection details.

7. Soils
- a. Verify footing excavation for suitability for planned footing.
- b. Verify material used for compacted backfill.
- c. Test compacted backfill for specified compaction.

17. Special Cases
- a. Post-installed anchors. Inspection requirements based on manufacturer's requirements, as described in the ICC Evaluation Service Report (ICC-ESR).

Add the following if required for your project:

1. Weld - Structural Steel *(see also IBC Table 1705.2.2)*
- e. Verification of weldability of reinforcing steel other than ASTM A706 (periodic).
- f. Shear reinforcement, or intermediate or special moment frames (continuous).
- g. Other reinforcing steel (periodic).
- h. Complete and partial penetration groove welds (continuous).
- i. Multipass fillet welds or single pass fillet welds > 5/16" (continuous).

2. Structural Steel Details
- b. Verification of end connections of open web steel joists and joist girders.
- c. Provide periodic visual inspections of bridging installation.

3. High-Strength Bolting
- e. Slip-critical connections (continuous inspection).

4. Concrete *(see also IBC Table 1705.3)*

For PT:
- e. Provide periodic visual inspections of reinforcing steel, including prestressing tendons, and placement.
- f. Periodic inspection for maintenance of specified curing temperature and techniques.
- g. Continuous inspection of prestressing concrete for application of prestressing forces.
- h. Periodic inspection of in-situ concrete strength, prior to stressing of tendons and prior to removal of shores and formwork from beams and structural slabs.

For Formwork:
- e. Inspection of formwork for shape, locations, and dimensions prior to concrete placement.

For Precast:
- e. Periodic inspection of precast member layout and configuration for conformance with the design and shop drawings.
- f. Periodic inspection of precast member bearing conditions and connections for conformance with the design and shop drawings.
- g. Inspect welded precast conditions.
  - I. Visually inspect 10% of welds not intended to carry the weight of the precast member.
  - II. Visually inspect 100% of welds intended to transfer the full weight of precast members to adjacent structure.

5. Masonry
For Risk Category IV (Level C Quality Assurance)

6. Wood Assemblies
- c. Verify installation of high load diaphragms in accordance with IBC 1705.5.1
- d. Provide visual inspection of truss erection procedures on trusses over 60 feet in length. Verify truss installation complies with referenced document BCSI 1-03 for the following items:
  - I. Proper lifting procedures including use of stiffbacks and spreader bars.
  - II. Proper interior ground bracing designed by the contractor's structural engineer and BCSI 1-03.
  - III. Installation of required top and bottom chord temporary bracing as required by BCSI 1-03.
  - IV. Installation of permanent continuous lateral bracing (CLB) for web members as specified by the truss supplier and the required diagonal bracing for these CLBs per BCSI 1-03.

8. Driven Deep Foundations: *(See also IBC table 1705.7)*
- a. Verify pile materials, sizes, and lengths comply with design requirements.
- b. Determine required penetration to achieve design capacity.
- c. Record the following:
  - I. Type and size of hammer used.
  - II. Continuous record of number of blows/ft for each foot of penetration.
  - III. Verify pile location and variance from plan, tip elevation/depth, and elevation of butt before and after cut-off.

9. Cast-in-Place Deep Foundations: *(See also IBC table 1705.8)*
- a. For Concrete Piers, perform inspections as required under Concrete Testing above.
- b. For Masonry Piers, perform inspections as required under Masonry Testing above.
- c. Observe drilling operations and record the following:
  - I. Verify location, variance from plan, and plumbness.
  - II. Confirm pier diameters, bell diameters (if applicable), lengths, embedments into bedrock (if applicable), and adequate end bearing strata capacity.

10. Helical Pile Foundations: *(See also IBC section 1705.9)*
- a. Before the start of work - Verify manufacturer, verify installer's certification by the manufacturer, and confirm pile and bracket configuration compliance with construction documents and this evaluation report.
- b. On a continuous basis, observe all Helical Pile installation operations and maintain complete and accurate record for all piles installed to verify the following.
  - I. Helical Pile types, configuration and section lengths.
  - II. Pile location (grid) and variance from plan.
  - III. Installation equipment type.
  - IV. Record of effective torsional resistance for final 10 feet of penetration.
  - V. Type of torque indicator used.
  - VI. Required penetration to achieve design capacity.
  - VII. Lead and Extension section diameters and number/size of helix plates.
  - VIII. Cement grout placement (if required) including quantity, method of placement and pump pressure.
  - IX. Penetration elevation/depth.
  - X. Top-of-Pile elevation and cut-off elevation.
  - XI. Inclination of pile (plumbness).
  - XII. Documentation of interruptions, obstructions or pile damage.
- c. On a continuous basis, determine capacities of individual helical piles and observe/document load test results (load increments and deflection).
- d. Review field data, judge pile capacity for both production helical piles and load-tested helical piles for general compliance with Construction Documents and Geotechnical Report; and submit report.

11. Special Inspections for Wind Resistance - Structural Wood
- a. Provide periodic inspection of diaphragms and shear walls, where sheathing fastening spacing is 4" or less:
  - I. Panel type, grade, and thickness.
  - II. Sheathing Fastening, including: nailing, screwing, and other fastening.
  - III. Anchoring, including hold-downs and straps.
- b. Provide periodic inspection of drag struts and bracing:
  - I. Fastener size and spacing.
  - II. Attachment to supporting structure.
- c. Provide continuous inspection of field gluing of diaphragm and shear wall sheathing to framing.

STRUCTURAL ABBREVIATIONS

A

ACI	AMERICAN CONCRETE INSTITUTE
ADD	ADDENDUM
ADDN'L	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
AMT	AMOUNT
ANCH	ANCHOR, ANCHORAGE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECT(URAL)
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASD	ALLOWABLE STRESS DESIGN
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWPB	AMERICAN WOOD PRESERVATIVE BUREAU
AWS	AMERICAN WELDING SOCIETY

B

BD	BOARD
BDE	BOTTOM OF DECK ELEVATION
BFE	BOTTOM OF FOOTING ELEVATION
BGBE	BOTTOM OF GRADE BEAM ELEVATION
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOT OR BTM	BOTTOM
BP	BASE PLATE
BPCE	BOTTOM OF PILE CAP ELEVATION
BRG	BEARING
BS	BOTH SIDES
BTWN	BETWEEN

C

C	CHANNEL
CANT	CANTILEVER(ED)
CFS	COLD-FORMED STEEL
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT
CNTR	CENTER
CNTR'D	CENTERED
COL	COLUMN
COMP	COMPOSITE
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS

D

DBA	DEFORMED BAR ANCHOR
DBE	DECK BEARING ELEVATION
DBL	DOUBLE
DEFL	DEFLECTION
DEMO	DEMOLITION
DET OR DTL	DETAIL
D. FIR	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM(S)	DIMENSION(S)
DL	DEAD LOAD
DN	DOWN
DWG(S)	DRAWING(S)
DWL(S)	DOWEL

E

(E) or EXIST	EXISTING
E	EAST
EA	EACH
EDBE	EXISTING DECK BEARING ELEVATION
EF	EACH FACE
EL OR ELEV	ELEVATION
ELEC	ELECTRICAL
ENCL	ENCLOSURE
ENG	ENGINEER
EOR	ENGINEER OF RECORD
ES	EACH SIDE
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR

F

FAB	FABRICATE OR FABRICATOR
FD	FLOOR DRAIN
FDN	FOUNDATION
FFE	FINISH FLOOR ELEVATION
FLR	FLOOR
FRT	FIRE RETARDANT TREATED
FS	FAR SIDE
FT	FEET OR FOOT
FTG	FOOTING
FV	FIELD VERIFY

G

GA	GAGE, GUAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLULAM	GLUED LAMINATED WOOD
GYP	GYPSUM

H

HDR	HEADER
HGR	HANGER
HK	HOOK
HORIZ	HORIZONTAL
HS	HEADED STUD(S)
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT

I

IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH
INFO	INFORMATION
INT	INTERIOR

J

JBE	JOIST BEARING ELEVATION
JST(S)	JOIST(S)
JT	JOINT

K

K	KIP(S)
KLF	KIPS PER LINEAL FOOT
KSI	KIPS PER SQUARE INCH

L

L	ANGLE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LRFD	LOAD RESISTANCE FACTOR DESIGN
LSL	LAMINATED STRAND LUMBER OR LONG-SLOTTED
LT	LIGHT
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
LWC	LIGHT WEIGHT CONCRETE

M

M	MOMENT
MAS	MASONRY
MATR'L	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MISCELLANEOUS CHANNEL
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MSR	MACHINE STRESS RATED
MTL	METAL

N

N	NORTH
NDS	NATIONAL DESIGN SPECIFICATION
NIC	NOT IN CONTRACT
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE

O

OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
OVS	OVERSIZED

P

PAF	POW(D)ER-ACTUATED FASTENER
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PERIM	PERIMETER
PL	PLATE
PLF	POUNDS PER LINEAL FOOT
PLK	PLANK
PROJ	PROJECTION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POST TENSION
PV	PHOTOVOLTAIC

Q

QTY	QUANTITY

R

RAD	RADIUS
RD	ROOF DRAIN
REBAR	REINFORCING BAR
REINF	REINFORCE(D), (ING)
REQ'D	REQUIRED
REV	REVERSE(D) OR REVISE(D), REVISION
RO	ROUGH OPENING

S

S	SOUTH OR STEP
SCHED	SCHEDULE
SEC	SECTION
SER	STRUCTURAL ENGINEER OF RECORD
SHT	SHEET
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SL	SNOW LOAD
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SPF	SPRUCE/PINE/FIR
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT-SLOTTED
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURE OR STRUCTURAL
SUPP	SUPPORT
SWS	STRUCTURAL WOOD SCREWS
SYP	SOUTHERN YELLOW PINE

T

T & B	TOP AND BOTTOM
T & G	TONGUE AND GROOVE
TBE	TOP OF BEAM ELEVATION
TC	TENSION CONTROL
TDE	TOP OF DECK ELEVATION
TEBE	TOP OF EXISTING BEAM ELEVATION
TEDE	TOP OF EXISTING DECK ELEVATION
TEFE	TOP OF EXISTING FOOTING ELEVATION
TEMP	TEMPORARY
TESE	TOP OF EXISTING SLAB ELEVATION
TEWE	TOP OF EXISTING WALL ELEVATION
TFE	TOP OF FOOTING ELEVATION
TGBE	TOP OF GRADE BEAM ELEVATION
THRU	THROUGH
TLE	TOP OF LEDGE ELEVATION
TPCE	TOP OF PILE CAP ELEVATION
TPE	TOP OF PIER ELEVATION TOP OF PLANK ELEVATION
TPI	TRUSS PLATE INSTITUTE
TRANS	TRANSVERSAL
TRTD	TREATED
TSE	TOP OF SLAB ELEVATION
TWE	TOP OF WALL ELEVATION
TYP	TYPICAL

U

UNEXC	UNEXCAVATED
UNO	UNLESS NOTED OTHERWISE

V

VER	VERIFY
VIF	VERIFY IN FIELD
VERT(S)	VERTICAL(S)

W

W	WEST OR WIDE FLANGE
w/	WITH
WD	WOOD
WP	WORK POINT
WWF	WELDED WIRE FABRIC

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LICENSED PROFESSIONAL ENGINEER
under the laws of the State of Minnesota.

signature | date

name | registration number
JORDAN J. HURST | 00000

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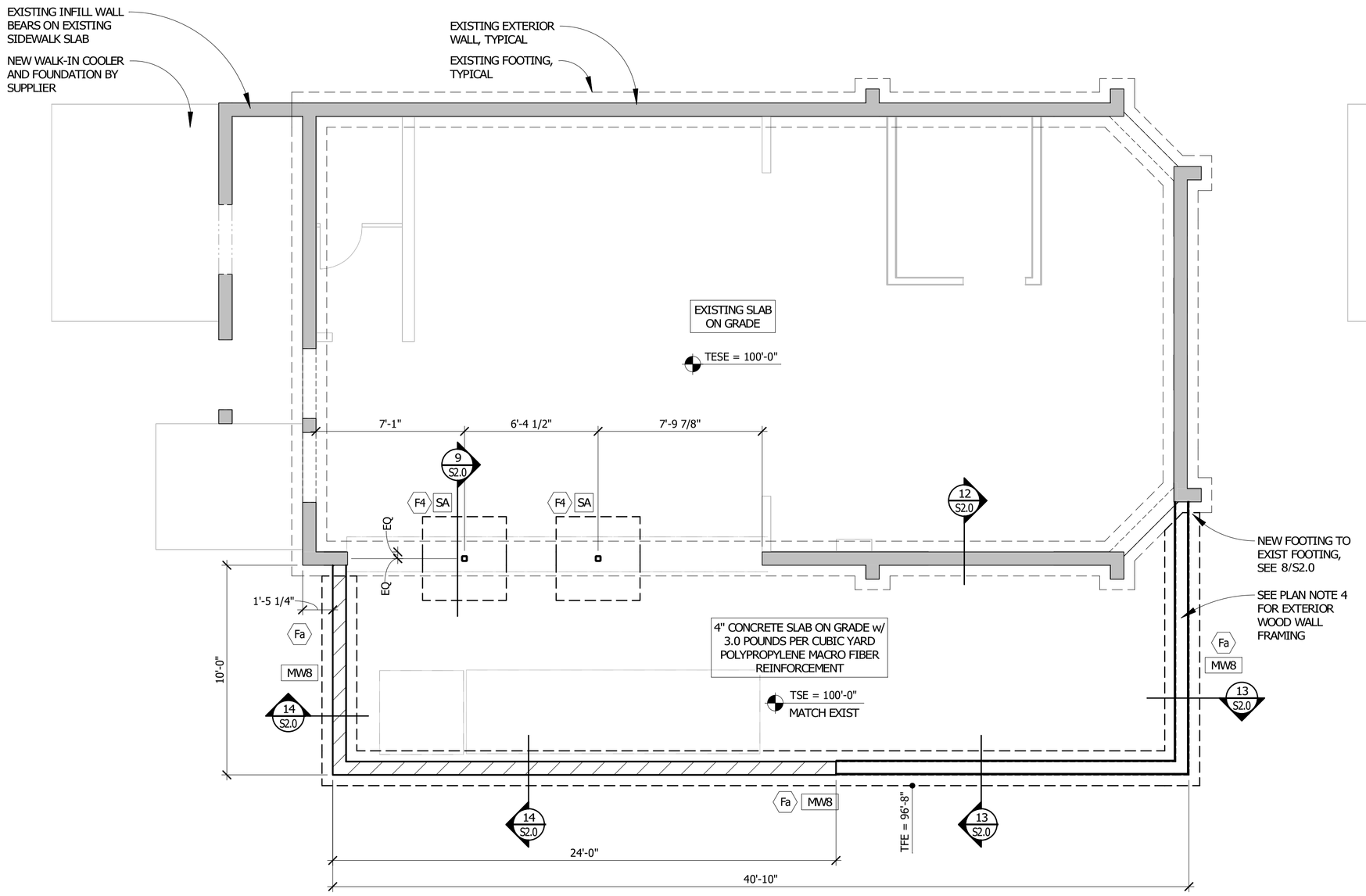
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SHEET TITLE:
SPECIAL INSPECTIONS

SHEET NUMBER:
S0.1

5.1C - PLAN SET

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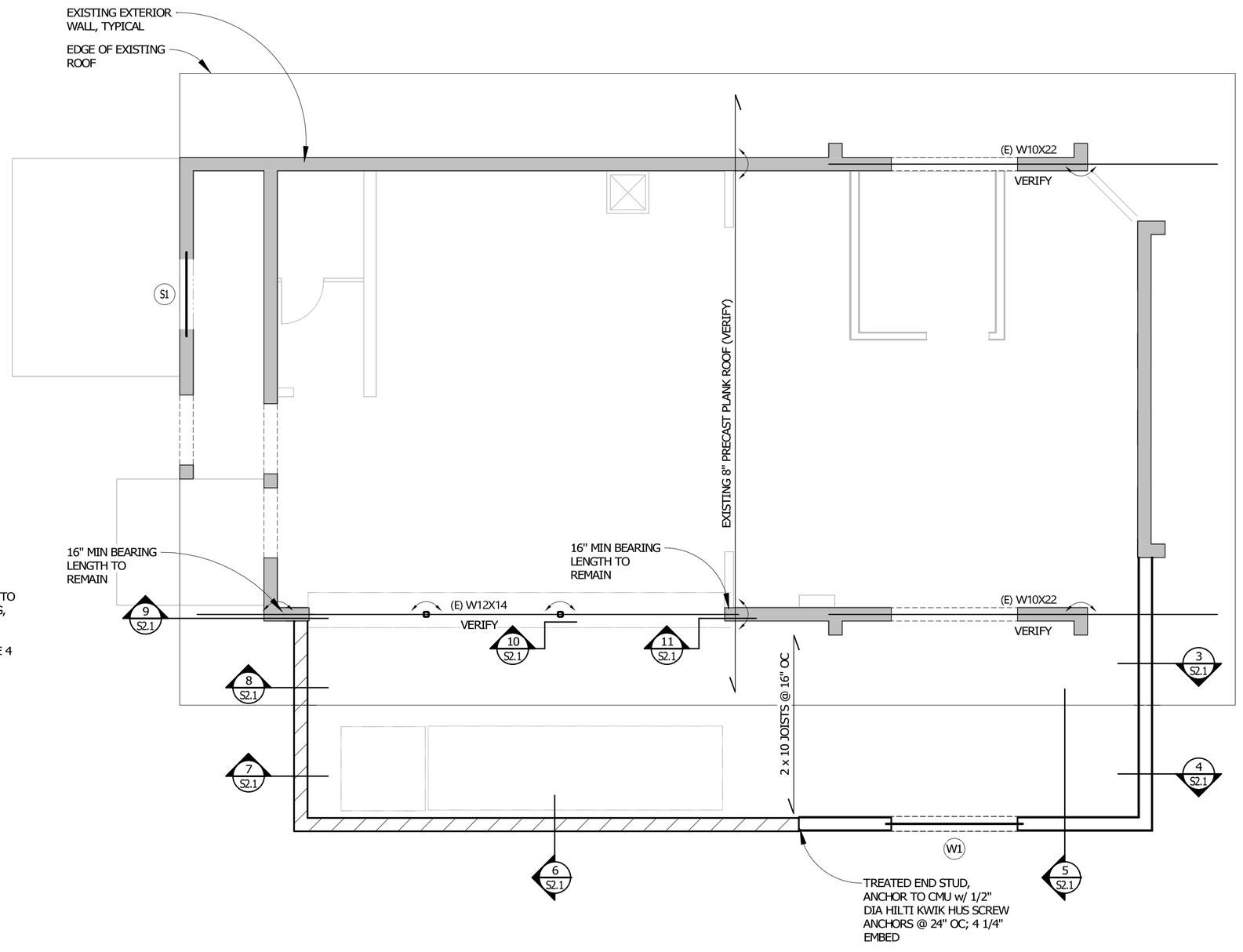


1 S1.0 FOUNDATION PLAN

1/4" = 1'-0"

PLAN NOTES (TYPICAL UNLESS NOTED OTHERWISE):

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND DETAILS OF EXISTING STRUCTURE WHERE THEY AFFECT STRUCTURAL WORK. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF RECORD IF THERE ARE ANY DEVIATIONS FROM CONTRACT DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION OF STRUCTURAL MEMBERS.
2. SEE DETAILS 2/S2.0 AND 3/S2.0 FOR TYPICAL SLAB ON GRADE JOINTS.
3. SEE ARCHITECTURAL DRAWINGS FOR SLOPED SLABS AND FLOOR DRAINS.
4. MAINTAIN MINIMUM OF 42" COVER (FINAL GRADE ELEVATION TO BOTTOM OF FOOTING) AT ALL EXTERIOR WALL FOOTINGS. STEP FOOTINGS AS NECESSARY TO MAINTAIN COVER AND TO CLEAR UNDERGROUND UTILITIES/SLOPED SLABS. SEE DETAIL 1/S2.0 FOR TYPICAL STEPPED FOOTING. APPROXIMATE LOCATIONS MARKED THUS: " ".
5. SEE 4/S2.0 FOR TYPICAL UNDERGROUND PIPING EXCAVATION.
6. SEE 6/S2.0 AND 7/S2.0 FOR TYPICAL CMU CONTROL JOINT DETAIL.



2 S1.0 ROOF FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES (TYPICAL UNLESS NOTED OTHERWISE):

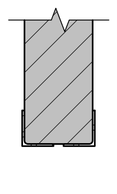
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2. MARKS THUS: " " INDICATE SPAN DIRECTION OF FRAMING MEMBERS.
3. ROOF SHEATHING SHALL BE 23/32" OR 19/32" PERFORMANCE CATEGORY PLYWOOD/OSB (MINIMUM). ATTACH SHEATHING TO ROOF FRAMING MEMBERS WITH 10d NAILS @ 6" OC AT PANEL EDGES AND @ 6" OC AT INTERMEDIATE SUPPORTS.
4. EXTERIOR WOOD WALLS SHALL BE 2 x 8 STUDS @ 16" OC. INTERIOR WALL SHEATHING TO BE 5/8" GYPSUM w/ 8d COOLER NAILS @ 7" OC (EDGE AND FIELD). EXTERIOR WALL SHEATHING TO BE 15/32" PERFORMANCE CATEGORY PLYWOOD w/ 8d NAILS @ 8" OC (EDGE) AND @ 12" OC (FIELD.
5. MARKS THUS: " " INDICATE FRAMING TO BE CONTINUOUS OVER SUPPORT.

FOOTING SCHEDULE		
MARK	SIZE	REINFORCEMENT
F4	4'-0" x 4'-0" x 12" THICK	(4) - #5 EACH WAY BOTTOM
Fa	20" x 12" THICK CONTINUOUS	(2) - #5 CONTINUOUS

CMU WALL REINFORCEMENT SCHEDULE		
MARK	WALL TYPE	REINFORCEMENT
MW8	8" CMU	#5 @ 48" OC

STEEL COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	REMARKS
SA	HSS3X3X1/4	3/4" x 4" x 9"	(2) - 3/4" DIA ANCHOR RODS; 6" MIN EMBED

STEEL LINTEL SCHEDULE			
MARK	SIZE	BEARING LENGTH	REMARKS
S1	(2) - L4 x 3 1/2 x 1/4"	8" MIN	



WOOD BEAM/BEARING HEADER SCHEDULE	
MARK	SIZE
W1	(2) - 2 x 10

SCHEDULE NOTES (TYPICAL UNLESS NOTED OTHERWISE):

1. SEE 1/S2.1 FOR FRAMING ELEVATION.
2. HEADERS IN NON-LOAD BEARING WALLS ARE NOT INDICATED ON PLAN. FOLLOW SCHEDULE BELOW FOR ALL NON-LOAD BEARING WALL HEADERS.

WOOD NON-LOAD BEARING HEADER SCHEDULE (UNMARKED)		
SPAN	SIZE	TRIMMER STUDS
0'-0" TO 6'-0"	(2) - 2 x 4	1
6'-0" TO 8'-0"	(2) - 2 x 6	1
8'-0" TO 10'-0"	(2) - 2 x 8	1
10'-0" TO 12'-0"	(2) - 2 x 10	2

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signature | date

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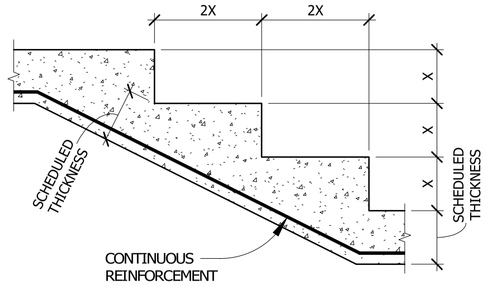
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SHEET TITLE:
FOUNDATION AND ROOF FRAMING PLAN

SHEET NUMBER:
S1.0

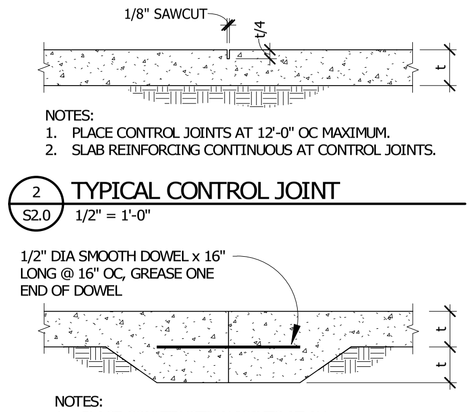
5.1C - PLAN SET

© J D A DESIGN ARCHITECTS



NOTES:
1. MAXIMUM VERTICAL STEP "X" = 2'-0".

1 S2.0 TYPICAL STEPPED FOOTING
1/2" = 1'-0"



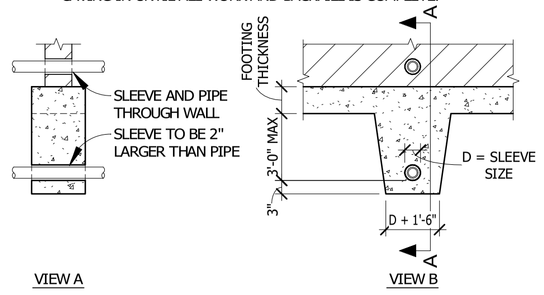
NOTES:
1. PLACE CONTROL JOINTS AT 12'-0" OC MAXIMUM.
2. SLAB REINFORCING CONTINUOUS AT CONTROL JOINTS.

2 S2.0 TYPICAL CONTROL JOINT
1/2" = 1'-0"

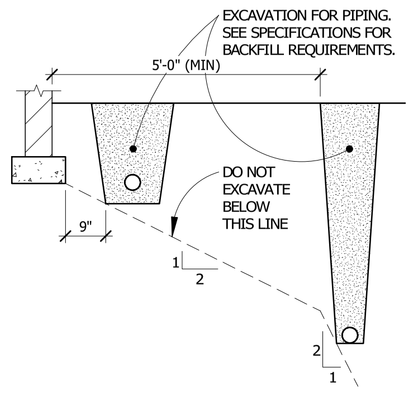
NOTES:
1. PLACE CONSTRUCTION JOINTS AT ALL DISCONTINUOUS SLAB POURS.
2. SLAB REINFORCING DISCONTINUOUS AT CONSTRUCTION JOINTS.

3 S2.0 TYPICAL CONSTRUCTION JOINT
1/2" = 1'-0"

NOTES:
1. USE THIS DETAIL FOR PIPES LESS THAN 3'-0" BELOW FOOTING.
2. FOR PIPES DEEPER THAN 3'-0" BELOW FOOTING, USE STEPPED FOOTING DETAIL TO STEP FOOTING TO WITHIN 3'-0" MAXIMUM.
3. IT IS CONTRACTOR'S RESPONSIBILITY TO PROVIDE SHORING, SHEATHING, ETC TO MAINTAIN SIDES OF EXCAVATION FROM CAVING IN UNTIL ALL WORK AND BACKFILL IS COMPLETE.

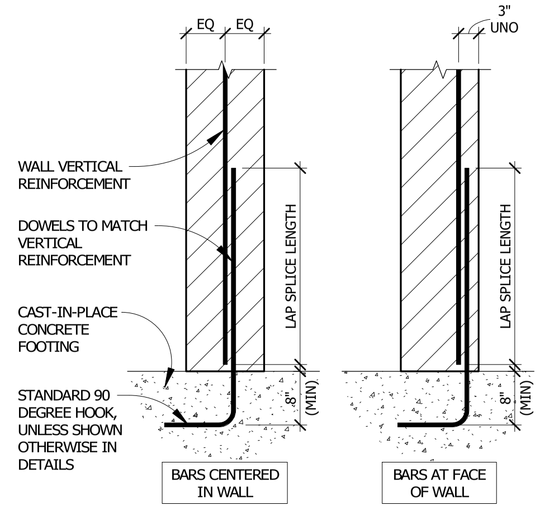


PIPES PERPENDICULAR TO FOOTINGS



PIPES PARALLEL TO FOOTINGS

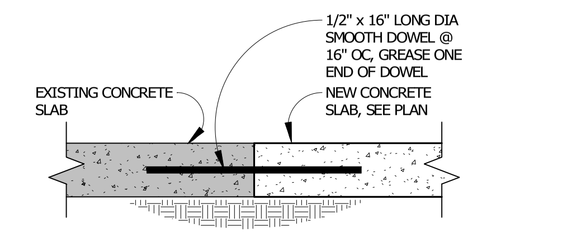
4 S2.0 TYPICAL UNDERGROUND PIPING EXCAVATION
1/2" = 1'-0"



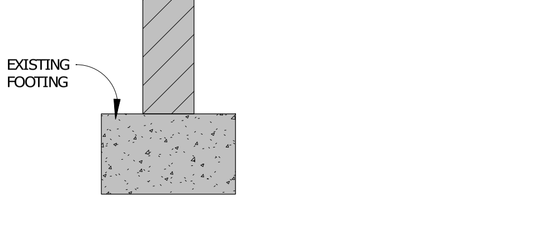
MINIMUM BAR LAP SPLICE LENGTH IN CMU		
BAR SIZE	CENTERED	AT FACE
#4	18"	18"
#5	20"	26"

SCHEDULE NOTES:
1. INCREASE LAP LENGTH BY 50% FOR EPOXY COATED BARS.
2. MECHANICAL SPLICE ALTERNATIVE MAY BE SUBMITTED TO ENGINEER OF RECORD FOR APPROVAL.

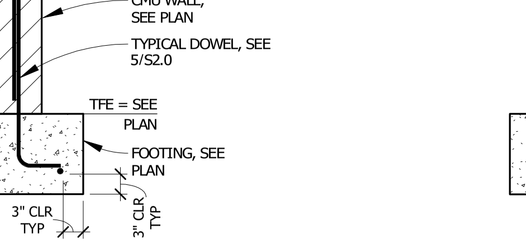
5 S2.0 TYPICAL DOWELS AND SPLICES AT CMU WALLS
3/4" = 1'-0"



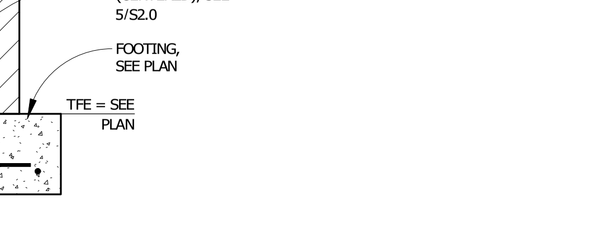
6 S2.0 TYPICAL CMU CONTROL JOINT - PLAN VIEW
1 1/2" = 1'-0"



7 S2.0 TYPICAL CMU BOND BEAM CONTROL JOINT - PLAN VIEW
1 1/2" = 1'-0"



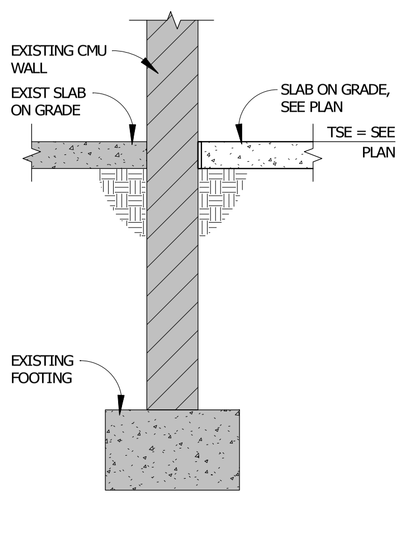
8 S2.0 NEW FOOTING TO EXISTING FOOTING
3/4" = 1'-0"



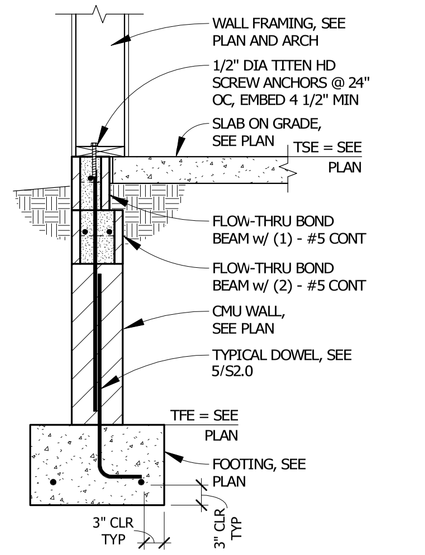
9 S2.0 SECTION
3/4" = 1'-0"

10 S2.0 TYPICAL STEEL COLUMN BASE ANCHOR SETTING
1" = 1'-0"

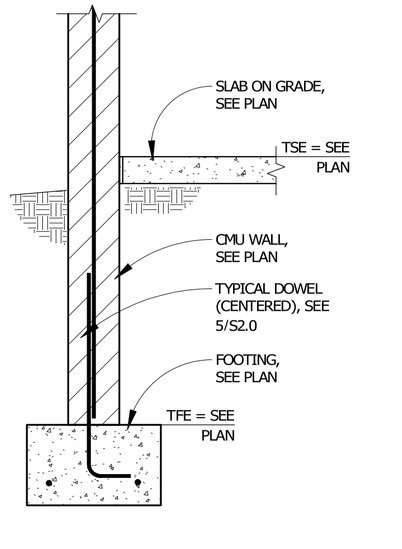
11 S2.0 NEW SLAB TO EXISTING SLAB
1 1/2" = 1'-0"



12 S2.0 SECTION
3/4" = 1'-0"



13 S2.0 SECTION
3/4" = 1'-0"



14 S2.0 SECTION
3/4" = 1'-0"

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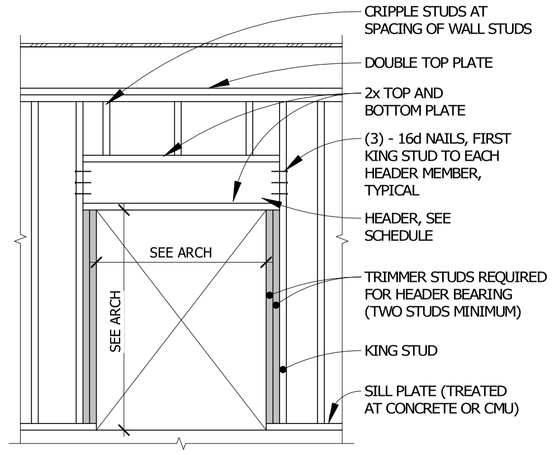
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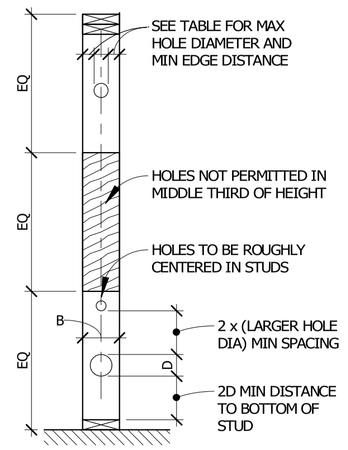
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S2.0

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1 S2.1 **TYPICAL FRAMING AT WOOD OPENINGS**
1/2" = 1'-0"



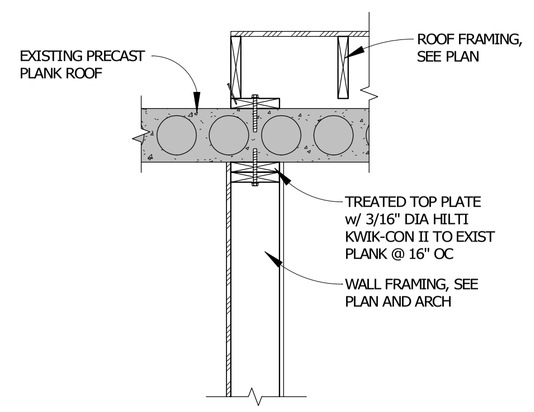
BEARING WALL OR EXTERIOR WALL		
NOMINAL STUD SIZE	MAX D 0.40B	MIN EDGE DISTANCE 0.30B
2 x 4	1 3/8"	1 1/8"
2 x 6	2 1/8"	1 5/8"
2 x 8	2 3/4"	2 1/8"

INTERIOR NON-BRG WALL *		
NOMINAL STUD SIZE	MAX D 0.60B	MIN EDGE DISTANCE 0.20B
2 x 4	2"	5/8"
2 x 6	3 1/4"	1"
2 x 8	4 1/4"	1 3/8"

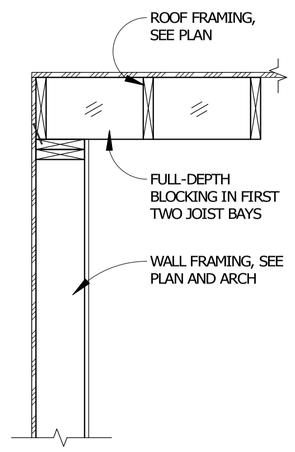
* TABLE MAY ALSO BE USED FOR BEARING WALLS IF STUDS WITH HOLES ARE DOUBLED

NOTE:
1. NOTCHES ARE NOT PERMITTED IN STUDS UNLESS SPECIFIED OR PRE-APPROVED BY SER.

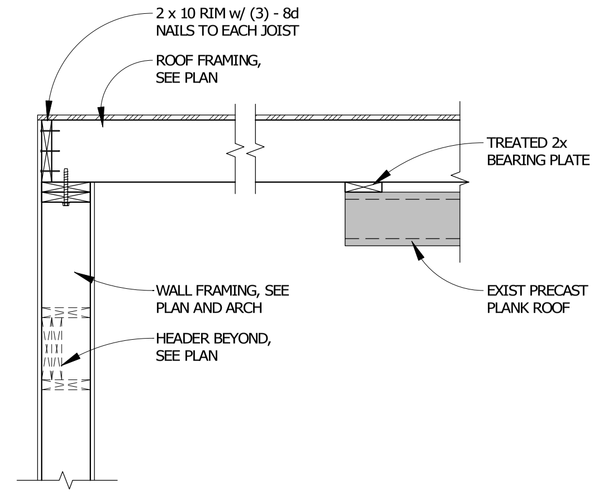
2 S2.1 **NOTCHES AND HOLES IN WOOD STUD WALLS**
3/4" = 1'-0"



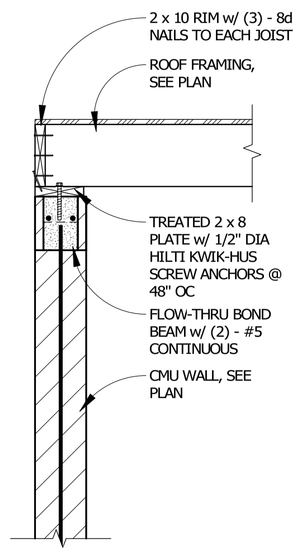
3 S2.1 **SECTION**
3/4" = 1'-0"



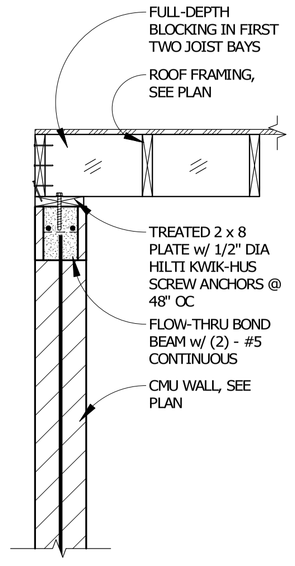
4 S2.1 **SECTION**
3/4" = 1'-0"



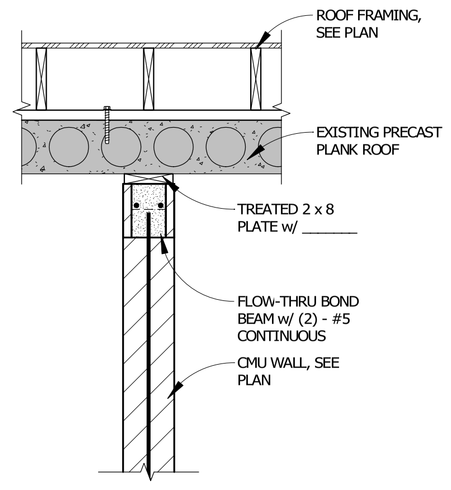
5 S2.1 **SECTION**
3/4" = 1'-0"



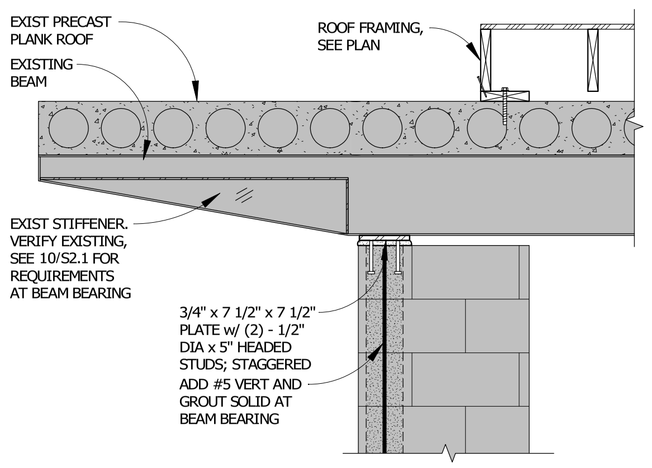
6 S2.1 **SECTION**
3/4" = 1'-0"



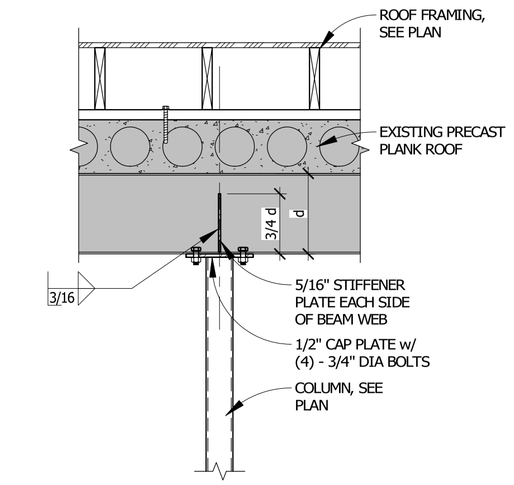
7 S2.1 **SECTION**
3/4" = 1'-0"



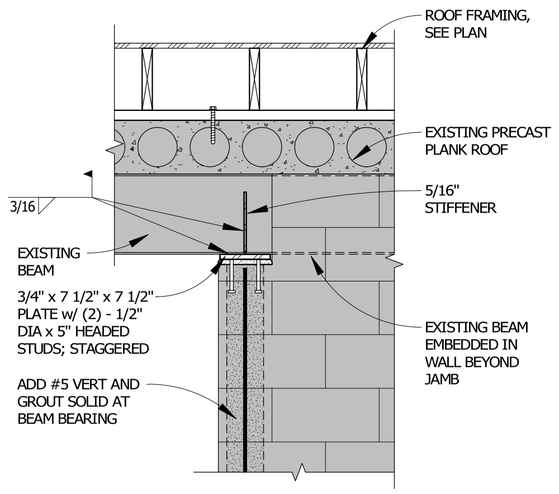
8 S2.1 **SECTION**
3/4" = 1'-0"



9 S2.1 **SECTION**
3/4" = 1'-0"



10 S2.1 **SECTION**
3/4" = 1'-0"



11 S2.1 **SECTION**
3/4" = 1'-0"

PRELIMINARY DRAWING
NOT FOR CONSTRUCTION

JDA
DESIGN ARCHITECTS
Minnetonka
Minnesota 55343
Telephone: 612.817.0050
www.jdadesign.com

CONSULTANTS:

Mattson Macdonald Young structural engineers
105 5th Ave S, Suite 100
Minneapolis, MN 55401
612-827-7825
mmyeng.com

MMY Project #23267

JJ's Chicken & Fish

7749 Zane Avenue North
Brooklyn Park, Minnesota

CERTIFICATION:
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly LICENSED PROFESSIONAL ENGINEER under the laws of the State of Minnesota.

signature | date

name | registration number
JORDAN J. HURST | 00000

REVISION HISTORY:

description	date

ISSUED FOR:
ABC

ISSUE DATE:

DRAWN BY: MAD | CHECKED BY: JJH

SHEET TITLE:
DETAILS

SHEET NUMBER:
S2.1

© J D A DESIGN ARCHITECTS

5.1C - PLAN SET

City of Brooklyn Park
Planning Commission Staff Report

Agenda Item:	5.2	**Meeting Date:**	February 14, 2024
Agenda Section:	Public Hearing	**Originating Department:**	Community Development
Resolution:	X		
Ordinance:		**Prepared By:**	Erin McDermott, Associate Planner
Attachments:	4	**Presented By:**	Erin McDermott, Associate Planner
Item:	**Clean Freak Car Wash** – Planning Case #24-101 Site Plan and Conditional Use Permit request for the development of a car wash on a property zoned PCDD – Planned Community Development District.		

Proposed Actions:

MOTION _____ SECOND _____ TO RECOMMEND APPROVAL OF SITE PLAN REVIEW FOR THE CONSTRUCTION OF A CAR WASH AT 8555 EDINBURGH CENTER DRIVE, SUBJECT TO CONDITIONS IN THE DRAFT RESOLUTION.

MOTION _____ SECOND _____ TO RECOMMEND APPROVAL OF CONDITIONAL USE PERMIT FOR THE OPERATION OF A CAR WASH AT 8555 EDINBURGH CENTER DRIVE, SUBJECT TO CONDITIONS IN THE DRAFT RESOLUTION.

Summary:

This request is for the development of a new car wash facility on an undeveloped property in the PCDD zoning district. This request is for development of the final undeveloped lot in the Edinburgh Center development.

Land Use Plan	Community Commercial
Current Zoning	PCDD – Planned Community Development
Proposed Zoning	No proposed change
Site Area	1.857 acres
Conforms to	
Land Use Plan	Yes
Zoning Code	Yes
Subdivision Ordinance	Yes
Notification	Legal notice was published in the Sun Post, 24 Notices were mailed to properties within 500 feet, Proposed Development Sign was placed on the property, A Neighborhood email was sent to the Edinburgh neighborhood.
60- and 120- Days (§15.99)	March 5, 2024; May 4, 2024

Previous Approvals:

Planning case 22-122 was approved for the re-platting of existing lots to reconfigure for a new buildable lot in anticipation of this proposed development.

Planning Case 09-111 was approved for a Conditional Use Permit to fill the wetland on this site to allow for an additional buildable lot for a future commercial lot. Edinburgh Center 2nd Addition was approved in 1996 as Planning Case 96-113, with a CUP for the operation of a grocery store as Planning Case 96-116.

Current Conditions:

Wetland fill was performed upon approval of CUP 09-111 to create a buildable lot. Utilities have been provided to this site as part of previous development in this area.

Land Use/Zoning (and Overlay):

This development is guided as Community Commercial in the 2040 Comprehensive Plan and is presently zoned PCDD Planned Community Development District. The creation of a new commercial property in this development conforms to both governing documents by allowing for the future development of another commercial use in this existing commercial plaza.

Proposed Development:

The applicant is proposing to construct a drive through car wash with a parking area that offers vacuums to customers.

Site Plan Review:

Site plans must be reviewed against the evaluation criteria required by the Code (§ 152.033).

Lighting:

The lighting plan includes pole lighting with a height of 18 feet, which is compliant with the maximum of 25 feet for properties farther than 500 feet from residential properties. The proposal does not meet required foot candles on private walkways, nor for building entrances. Additional lighting is required to be added at the building entrance to meet the performance standards outlined in §152.111.

Pedestrian Circulation:

Sidewalk is available across the front property line along Edinburgh Center Drive, with a pedestrian access to the building. The pedestrian circulation meets Zoning Ordinance requirements.

Parking:

Car washes do not have an established minimum parking requirement in the Code. Section §152.142 articulates that for uses not specifically listed, off-street parking requirements may be established by the City Manager based upon the characteristics of the use. This site provides 19 parking spaces, with 3 spaces being standard parking, and one accessible space. The site plan indicates the remaining 15 parking spaces will have vacuum access and are provided for the interior cleaning of vehicles. The proposed 19 parking stalls is reasonable for the proposed use.

Enclosures and Screening:

The proposed site plan shows a waste enclosure to the east of the proposed structure. The plans submitted show that the enclosure will be made of brick with doors and meets Code requirements. All HVAC equipment is

required to be screened pursuant to §152.375, and proof of screening will be required at time of building permit.

Landscaping:

Landscaping standards articulate four categories that must be addressed: Canopy Cover, Foundation Landscape, Open Area Landscape, and Street Trees. (§152.373)

- Canopy cover requires 10% of the parking lot to be greenspace with one tree for each 360 square feet of parking lot greenspace. The parking lot is 23,215 square feet, and the proposal for greenspace exceeds 10% with 4,265 square feet provided. The proposal meets the requirement for trees per required greenspace with seven trees provided.
- Foundation landscaping requires a minimum of 50% of the total building perimeter to be landscaped in an area no less than six feet in width. The proposed building perimeter measures 382 feet, making the required foundation landscaping 191 feet. The proposal exceeds the required landscaping with 242 feet provided.
- Open Area Landscape requirements address open space as well as overstory, ornamental, evergreen and shrub requirements. The proposal exceeds the minimum open space requirements of 30% by providing 50% open space. Overstory tree requirements are one overstory tree per 3,000 square feet of open space, the proposal meets this requirement with 7 overstory trees provided. Ornamental tree requirements are one ornamental tree per 1,500 square feet of open space, this proposal meets this requirement with 13 ornamental trees provided. Evergreen tree requirements are one evergreen per 3,000 square feet of open space, this proposal meets this requirement with 7 evergreen trees provided. Shrub requirements are one shrub per 100 square feet of open area, this proposal meets this requirement by providing 185 shrubs provided.
- The number of street trees required per property is calculated by street frontage, with one tree per 70 feet of street frontage. The property has 322 feet of frontage requiring 5 street trees, which are provided in the landscaping plan.

Architectural Standards:

The architectural standards articulated in the PCDD zoning district require at least two of the following:

- Variety in building elevations. No wall may have an uninterrupted length exceeding 80 feet without two of the following: changes in plane, color, texture or material pattern; inclusion of windows; or equivalent elements that subdivides the wall.
- A minimum of 50% of each building façade must be brick or stone. This standard applies to all walls of a building, including walls proposed to be removed for future expansion.
- Pitched roofs, or in the case of flat roofs, variable roof heights.

The proposal meets the standards, as 100% of the façade is brick, and the structure has varied roof heights.

Roadways:

The site is located on Edinburgh Center Drive North, which connects to 85th Avenue and Edinbrook Parkway. There is existing access to this site via a shared access point with Festival Foods. This access also serves the businesses in the existing commercial building to the north of the proposed lot.

Grading and Drainage:

It was noted during Planning Case 22-122 that an approximation of an additional 4 feet of fill will be required for construction, as the site was previously wetland, and the current conditions map shows there is a depression in the center of the proposed lot. The applicant will work with the watershed district to meet all requirements for drainage and fill, which is required to meet Condition 3.01 of Draft Resolution 2024-____ Approval of site plan review for the construction of a car wash at 8555 edinburgh center drive.

Utilities:

All utilities are available to the site along Edinburgh Center Drive to the south.

Conditional Use Permit:
Car Washes are a conditional use in the Planned Community Development District zoning district (§ 152.342.01). Conditional uses must be reviewed against the standards of the Code (§ 152.035). The use is evaluated below:

(D) Review Standards. The request may address the following factors, although the City Council, the Planning Commission, and city staff has the authority to request additional information from the applicant concerning operational factors pertaining to the proposed use or to retain experts with the consent and at the expense of the applicant concerning operational factors, when necessary to establish performance conditions to effect the intent of this chapter.

(1) Comprehensive Plan. Compliance with the Comprehensive Plan, public facilities and capital improvement plans, and all sections of the City Code.

This site is guided as Community Commercial in the 2040 Comprehensive Plan. This use is consistent with the Community Commercial future land use designation.

(2) *Traffic*. The generation and characteristics of the traffic associated with the use and its impact on the traffic volumes of and safety associated with driveway location on adjacent roads, sidewalks and trail connections.

There is one entrance to the site along Edinburgh Center Drive and two exits. The exit directly south of the car wash structure is an exit only. The applicant provided projected trips per day for city review, which was reviewed by and approved by the City Transportation Engineer.

(3) *Parking.* The characteristics of the parking area of the use, including the number and design of parking spaces, landscaping, traffic circulation, drainage, and lighting. The city may require additional parking above that required in § 152.140 through 152.146.

Car washes do not have an established minimum parking requirement in the Code. Section 152.142 articulates that for uses not specifically listed, off-street parking requirements may be established by the City Manager based upon the characteristics of the use. This site provides 19 parking spaces, with 3 spaces being standard parking, and one accessible space. The site plan indicates the remaining 15 parking spaces will have vacuum access and are provided for the interior cleaning of vehicles. The proposed 19 parking stalls is reasonable for the proposed use.

(4) *City services*. The provision of adequate public facilities and services to the site where the use is proposed and the ability of the existing infrastructure to absorb the additional demand for city services.

Access to City sewer and water services are available for this site. Development of this site will require further review of utilities and additional public services.

(5) *Screening and landscaping*. The ability to screen and buffer incompatible off-site impacts of the proposed use on adjacent property and the surrounding neighborhood. The city may require additional landscaping or screening above that required in the specific zoning district.

The proposed site plan shows a waste enclosure to the east of the proposed structure. The plans submitted show that the enclosure will be made of brick with doors and meets

Code requirements. All HVAC equipment is required to be screened pursuant to 152.375, and proof of screening will be required at time of building permit.

The landscaping complies with zoning requirements.

(6) ***Architectural standards*. The degree that the site or building associated with the proposed use meets or exceed the architectural design and landscaping standards for the district in which it is located. The city may require additional architectural standards above those required in the specific zoning district.**

The architectural standards articulated in the PCDD zoning district require at least two of the following:

- Variety in building elevations. No wall may have an uninterrupted length exceeding 80 feet without two of the following: changes in plane, color, texture or material pattern; inclusion of windows; or equivalent elements that subdivides the wall.
- A minimum of 50% of each building façade must be brick or stone. This standard applies to all walls of a building, including walls proposed to be removed for future expansion.
- Pitched roofs, or in the case of flat roofs, variable roof heights.

The proposal meets the standards, as 100% of the façade is brick, and the structure has varied roof heights.

(7) ***Other sections of the city code*. The applicant may be required to submit additional information demonstrating that the development is able to comply with any other applicable section of this chapter or the city code.**

There are no additional code sections against which to review this CUP request.

The required findings of § 152.035 have been addressed and Staff recommends approval of the CUP request.

Conditions of Approval:

Staff recommends the adoption of Resolution 2024 - ___ subject to the following conditions as listed in the resolution:

1. Vehicle stacking must not extend into drive aisles or interfere with pedestrian circulation.
2. All conditions of Resolution 2024- ____ Approving Site Plan Review for the Construction of a Car Wash on a Property Zoned PCDD must be met.
3. The conditional use permit remains with the property as long as the property and use are in compliance with the conditions contained herein. The permit expires if the use has been discontinued for more than 364 consecutive days from the date that the use ceased, or the business owner fails to meet the certification requirements of the conditional use permit.
4. This resolution must be recorded with the Hennepin County Recorder's office prior to the issuance of building permits.

Staff Recommendation:

Staff recommends Planning Commission recommend approval of the resolutions approving the Site Plan and Conditional Use Permit for the operation of a car wash at 8555 Edinburgh Center Drive subject to the conditions as written in the attached resolution.

Alternatives to Consider:

1. Recommend approval of the plat as presented.
2. Recommend approval of the plat with modifications.
3. Recommend denial the proposal based on certain findings.

Budgetary/Fiscal Issues:

There are no budgetary or fiscal impacts anticipated by this application.

Attachments:

A. DRAFT SITE PLAN RESOLUTION
B. DRAFT CUP RESOLUTION
C. LOCATION MAP
D. PLAN SET

RESOLUTION #2024-

RESOLUTION APPROVING A SITE PLAN REVIEW FOR THE CONSTRUCTION OF A CAR WASH ON A PROPERTY ZONED PCDD

Planning Commission File #24-101

WHEREAS, an application has been made by CEI Engineering Associates, Inc. on behalf of LS Capital, Inc. for a Site Plan Review under the provisions of the City Code on properties legally described as:

Lot 3, Block 1 of Edinburgh Center Third Addition, Hennepin County, Minnesota

WHEREAS, the zoning of the property is PCDD – Planned Community Development District –in which car washes are conditional uses; and

WHEREAS, the effect of the proposed use upon the health, safety, and welfare of surrounding lands, existing and anticipated traffic conditions, and its effect on the neighborhood have been considered; and

WHEREAS, the matter has been referred to the Planning Commission who held the public hearing on February 14, 2024.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Brooklyn Park:

The Site Plan Review for the construction of a car wash is hereby approved with the following conditions:

1.00 DRAWINGS

1.01 Site, utility, landscaping, and grading plans for this development on file in the City Clerk's office dated January 5, 2024 are approved, subject to conditions listed below.

1.02 Building elevations for the car wash dated January 10, 2024 are approved to proceed to building permit, subject to conditions listed below.

2.00 BONDS, ESCROWS AND DIRECT PAYMENTS

2.01 A Development Contract and bonding shall be required as a development bond or letter of credit in the amount of **$**_____, a cash bond in the amount of **$**_____, and a developer's escrow in the amount of **$**_____ as required by Chapter 152. The developer's escrow must be posted with the City to cover engineering, legal and administrative costs incurred by the City. If this account becomes deficient, it shall be the developer's responsibility to deposit additional funds. This must be done before final bonding obligations are complete.

3.00 REQUIRED DOCUMENTS

3.01 All utility construction, drainage, grading and development plans must be approved by the City Engineer prior to receiving a building permit.

3.02 Updated lighting plan reflecting the required changes to conform with Chapter 152.

4.00 GENERAL CONDITIONS

4.01 It shall be the developer's responsibility to keep active and up to date the developer's contract and financial surety (Letter of Credit, bonds, etc.). These documents must remain active until the developer has been released from any further obligation by City Council motion received in writing from the Engineering Department.

4.02 Before final bonding obligations are released, a certificate signed by a registered engineer must be provided. This certificate will state that all final lot and building grades are in conformance to drainage development plan(s) approved by the City Engineer.

4.03 No burying of construction debris shall be permitted on the site.

4.04 Dust control and erosion measures must be in place to prevent for dust and erosion including, but not limited to, daily watering, silt fences, and seeding. The City Engineer may impose measures to reduce dust and run-off.

4.05 Adequate dumpsters must be on site during construction. When full, they must be emptied immediately or replaced with an empty dumpster.

4.06 Signs must conform to the requirements of Chapter 150. The sign plans will be approved by staff to verify code compliance at time of building permit.

4.07 Lighting must be updated to conform with the requirements of Chapter 152, additional lighting must be added to illuminate the private sidewalk and entrance of the structure to a minimum of 10 foot candles at ground level.

The petitioner shall be required to record a copy of this resolution with the Hennepin County Recorder and to pay all fees for said recording. Proof of said recording shall be filed promptly with the City. The building permit shall not be issued until or unless the recording is made within one year from the date of this approval.

RESOLUTION #2024-___

RESOLUTION APPROVING A CONDITIONAL USE PERMIT
FOR A CAR WASH AT 5909 96TH LANE NORTH

Planning Commission File #24-101

WHEREAS, an application has been made by CEI Engineering Associates, Inc. on behalf of LS Capital, Inc. for a Conditional Use Permit under the provisions of the City Code on property legally described as:

Lot 3, Block 1 of Edinburgh Center Third Addition, Hennepin County, Minnesota

WHEREAS, the zoning of the property is PCDD – Planned Community Development District –in which car washes are conditional uses; and

WHEREAS, the effect of the proposed use upon the health, safety, and welfare of surrounding lands, existing and anticipated traffic conditions, and its effect on the neighborhood have been considered; and

WHEREAS, the matter has been referred to the Planning Commission who held the public hearing on February 14, 2024.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Brooklyn Park:

The Conditional Use Permit for a car wash is hereby approved with the following conditions:

1. Vehicle stacking must not extend into drive aisles or interfere with pedestrian circulation.
2. All conditions of Resolution 2024- ____ Approving Site Plan Review for the Construction of a Car Wash on a Property Zoned PCDD must be met.
3. The conditional use permit remains with the property as long as the property and use are in compliance with the conditions contained herein. The permit expires if the use has been discontinued for more than 364 consecutive days from the date that the use ceased, or the business owner fails to meet the certification requirements of the conditional use permit.
4. This resolution must be recorded with the Hennepin County Recorder's office prior to the issuance of building permits.

If the petitioner needs additional time to satisfy the requirements listed in this Conditional Use Permit, then a one-year time extension must be requested. Time extensions are subject to the conditions found in the Zoning Code (Section 152.031(H)). The failure on the part of the petitioner to meet all conditions stated above by December 31, 2025 shall deem the Conditional Use Permit approval to be null and void.



Site Plan Review and Conditional Use Permit
Case #24-101 – 8555 Edinburgh Center Dr
Area of Request (August 2023 Air Photo)
8555 Edinburgh Center Dr

Brooklyn Park



5.2D - PLAN SET

SITE DEVELOPMENT PLANS

CLEAN FREAK CARWASH POWERED BY CIRCLE K

EDINBURGH CENTRE DR.

BROOKLYN PARK, MN

GENERAL NOTES:

A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS A CONTRACTOR TO THE SELLER/OWNER:

TOPOGRAPHY & BOUNDARY: WESTWOOD PROFESSIONAL SERVICES, INC.
12701 WHITEWATER DRIVE,
MINNETONKA, MN 55343
PH: (925) 937-5150

B. ALL PHASES OF SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE OWNER / DEVELOPER SITE WORK SPECIFICATIONS.

C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

D. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

E. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

F. WARRANTY/DISCLAIMER:
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER INSPECTS AND CONTROLS THE PHYSICAL CONSTRUCTION ON A CONTEMPORANEOUS BASIS AT THE SITE.

G. SAFETY NOTICE TO CONTRACTOR:
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

H. ALL CONSTRUCTION IN STATE HIGHWAY DEPARTMENT RIGHT-OF-WAY SHALL BE COORDINATED WITH THE HIGHWAY DEPARTMENT RESIDENT ENGINEER.

I. RESIDENT ENGINEERING SERVICES:
WHEN REQUESTED BY THE OWNER, RESIDENT ENGINEERING SERVICES SHALL BE PROVIDED BY THE ENGINEERS (ON A TIME AND FREQUENCY BASIS) ACCEPTABLE TO THE CITY ENGINEER FOR IMPROVEMENTS TO PUBLIC WATER MAINS, PUBLIC SEWER, AND CITY STREETS. AT THE COMPLETION OF CONSTRUCTION, THE ENGINEER SHALL CERTIFY THE CONSTRUCTION TO BE IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. THIS WORK WILL BE AT THE OWNER/DEVELOPER'S DIRECT EXPENSE AND SHALL BE COORDINATED WITH CEI ENGINEERING ASSOCIATES, INC. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENT ENGINEER OF ANY PRECONSTRUCTION / CONSTRUCTION CONFERENCES AND ANY PUBLIC CONSTRUCTION 24 HOURS PRIOR TO SAID ACTION.

APPROVED

CITY OF BROOKLYN PARK, MINNESOTA

DATE _____



VICINITY MAP
NOT TO SCALE

PLAN INDEX:

C0.0	COVER SHEET
C1.0	DEMOLITION PLAN
C2.0	SITE PLAN
C3.0	GRADING PLAN
C4.0	EROSION CONTROL PLAN
C5.0	UTILITY PLAN
C6.0	PAVING PLAN
C7.0	LANDSCAPING PLAN
C7.1	LANDSCAPE NOTES
C8.0	IRRIGATION PLAN
C8.1	IRRIGATION NOTES
C9.0	DETAIL SHEET 1
C9.1	DETAIL SHEET 2
C9.2	DETAIL SHEET 3
C9.3	DETAIL SHEET 4

ASSOCIATED PLANS:

SURVEY

1 OF 2	ALTA/ACSM SURVEY
2 OF 2	ALTA/ ACSM SURVEY

RESOURCE LIST:

ZONING
BROOKLYN PARK PLANNING DEPARTMENT
5200 85TH AVE N
BROOKLYN PARK, MN
PAUL MOGUSH
PHONE: (763) 493-8051
EMAIL: PAUL.MOGUSH@BROOKLYNPARK.ORG

BUILDING
BROOKLYN PARK BUILDING INSPECTIONS
5200 85TH AVE N
BROOKLYN PARK, MN
PHONE: (763) 488-6379

ENGINEERING
BROOKLYN PARK PLANNING DEPARTMENT
5200 85TH AVE N
BROOKLYN PARK, MN
CRAIG RUNNAKKO
PHONE: (763) 493-8109
EMAIL:CRAIG.RUNNAKKO@BROOKLYNPARK.ORG

STORMWATER
MINNESOTA POLLUTION CONTROL AGENCY
520 LAFAYETTE RD N
SAINT PAUL, MINNESOTA 55155
PHONE: (651) 757-2728
EMAIL: ONLINESERVICES.PCS@STATE.MN.US

FIRE DEPARTMENT
BROOKLYN PARK FIRE DEPARTMENT
5700 85TH AVE N
BROOKLYN PARK, MN 55443
T. JOHN CUNNINGHAM, FIRE CHIEF
PHONE: (763) 493-8020
EMAIL: WEB-FIREDEPTDL@BROOKLYNPARK.ORG

WATER AND SEWER
CITY OF BROOKLYN PARK
5200 85TH AVE N
BROOKLYN PARK, MN
DAN RUIZ
PHONE: (763) 493-8185

ELECTRIC
XCEL ENGERGY
414 NICOLLET MALL
MINNEAPOLIS, MN 55401
PHONE: 1-800-859-4999

NATURAL GAS
CENTERPOINT ENERGY
700 W LINDEN AVE
MINNEAPOLIS, MN 55403
PHONE: 1-800-245-2377

TELEPHONE
COMCAST/XFINITY
429 COMMERCE DRIVE
WOODBURY, MN 55125
PHONE: 866-456-5933

CEI CONTACT:

TRAVIS ALLEY
PROJECT MANAGER
TALLEY@CEIENG.COM
PHONE: (479) 273-9472

OWNER:

ODYSSEY SERVICES GROUP, LLC
CHRIS JOHNSON
NORTHWEST ARKANSAS
CHRIS.JOHNSON@ODYSSEYSERVICESGROUP.COM.COM
PHONE: (479) 402-4652

ARCHITECT:

HARRISON FRENCH & ASSOCIATES
MEGHAN DAVIS
1705 S. WALTON BLVD., STE 3
BENTONVILLE, AR 72712
MEGHAN.DAVIS@HFA-AE.COM.COM
PHONE: (479) 273-7780 EXT.269

Jeff St. Martin
Firemarshal@brooklynpark.org

NOTICE TO BIDDERS:

ALL QUESTIONS REGARDING THE PREPARATION OF THE GENERAL CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER'S FIELD CONSTRUCTION MANAGER:

CHRIS JOHNSON
ODYSSEY SERVICES GROUP, LLC
PHONE: (479) 402-4652

SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR. THE CONSULTING ARCHITECT AND/OR THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER/DEVELOPER.

FLOOD CERTIFICATION:

BY SCALED MAP LOCATION AND GRAPHICAL PLOTTING ONLY. THIS PROPERTY IS LOCATED IN ZONE "X" UNSHADED WHICH ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN DETERMINED BY THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP FOR HENNEPIN COUNTY, MINNESOTA
MAP NUMBER: 27053C0206F
MAP REVISED: NOVEMBER 4, 2016

811 Know what's below. Call before you dig.

CEI Solutions for Land and Life

CLEANFREAK CAR WASH Powered by CIRCLE K

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Andrew E Diehl
Printed Name: Andrew E Diehl
Date: 01/05/2024
License Number: 59050

ANDREW E DIEHL LICENSED PROFESSIONAL ENGINEER 59050 STATE OF MINNESOTA

CIVIL ENGINEERING ▪ LANDSCAPE ARCHITECTURE ▪ LAND SURVEYING ▪ PLANNING

BENTONVILLE | DALLAS | FRESNO | HOUSTON | JACKSONVILLE | MINNEAPOLIS | PHILADELPHIA | PHOENIX

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

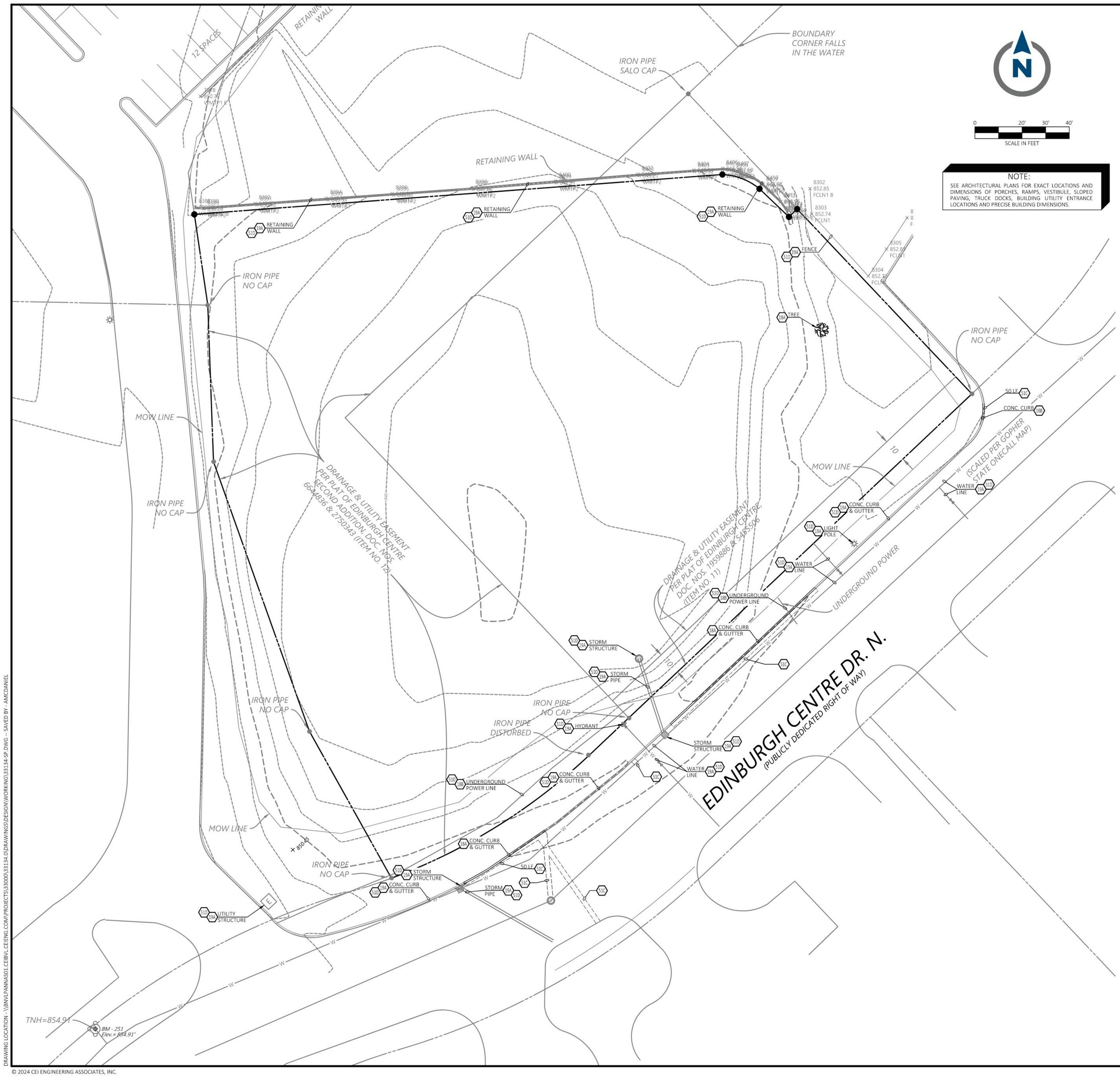
COVER SHEET
SHEET TITLE

SHEET NUMBER
C0.0

DRAWING LOCATION - \\BNV\PANNAS01.CEIBVL.CEIENG.COM\PROJECTS\33000\33134.01\DRAWINGS\DESIGN\WORKING\33134-CS.DWG -- SAVED BY - AMCDANIEL

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5.2D - PLAN SET

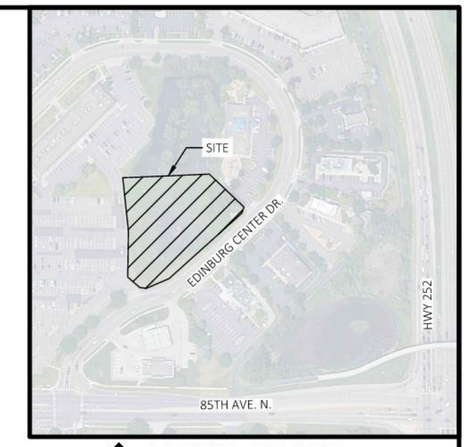


0 20' 30' 40'
SCALE IN FEET

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

811 Know what's **below.** **Call** before you dig.

SITE BENCHMARK
SITE BENCHMARK #1: BM-251; ELEV.=854.91'; HYDRANT SOUTHWEST OF SITE



VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING LEGEND

e	EAST OR ELECTRIC	OHT	OVERHEAD TELEPHONE
n	NORTH	OHTV	OVERHEAD TV
oh	OVERHEAD	X"SS	SANITARY SEWER
s	SOUTH OR SEWER	UGE	UNDERGROUND ELECTRIC
t	TELEPHONE	UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE
ug	UNDERGROUND	UGT	UNDERGROUND TELEPHONE
w	WEST OR WATER	UGTV	UNDERGROUND TV
	PROPERTY LINE	X"W	WATER
	RIGHT OF WAY LINE	X"G	GAS
	STORM DRAIN	OHE	OVERHEAD ELECTRIC
		OHE&T	OVERHEAD ELECTRIC AND TELEPHONE
		.5-10-11 50.5	TREE INFO .5 = DIAMETER OF TRUNK IN FEET 10 = HEIGHT OF TREE IN FEET 11 = CANOPY DIAMETER IN FEET 50.5 = ELEVATION AT BASE OF TREE

GENERAL DEMOLITION NOTES

A. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED THE "TRUEBLUE STANDARD SITE WORK SPECIFICATIONS".

B. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, UNDERGROUND STORAGE TANKS AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. SEE SITE WORK SPECIFICATIONS.

C. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.

D. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

E. ENGINEER'S NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

F. PRIOR TO ANY CONSTRUCTION IN RIGHT-OF-WAY, CONTRACTOR SHALL INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD.

G. ANY WORK TO TAKE PLACE OFF-SITE SHALL BE COORDINATED WITH THE APPROPRIATE PROPERTY OWNER.

DEMOLITION NOTES

18A EXISTING TO BE REMOVED.
18B EXISTING TO BE RELOCATED.
19A EXISTING TO REMAIN.
51C LIMITS OF SAWCUT AND PAVEMENT REMOVAL - SAWCUT A MINIMUM OF TWO FEET FROM FACE OF CURB.
51D PROTECT EXISTING STRUCTURES AND/OR PIPES DURING DEMOLITION AND CONSTRUCTION PHASES.

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E. DIEHL LICENSED PROFESSIONAL ENGINEER 59050 STATE OF MINNESOTA

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K

EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

DEMO PLAN
SHEET TITLE

SHEET NUMBER
C1.0

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5.2D - PLAN SET

ACREAGE SUMMARY TABLE	
PARCEL	± 61,500 SF (1.41 AC)
PERVIOUS AREA	± 29,669 SF (0.68 AC)
IMPERVIOUS AREA	± 31,831 SF (0.73 AC)

PARKING TABLE		
	SPACES REQUIRED	SPACES PROVIDED
STANDARD CAR PARKING	3 SPACES	4 SPACES
ACCESSIBLE PARKING	1 SPACE	1 SPACE
TOTAL CAR PARKING	4 SPACES	19 SPACES

SITE INFORMATION	
ZONING	PLANNED UNIT DEVELOPMENT
SETBACKS	
NORTH	30' BUILDING; 5' LANDSCAPE
SOUTH	50' BUILDING; 15' LANDSCAPE
EAST	10' BUILDING; 5' LANDSCAPE
WEST	20' BUILDING; 15' LANDSCAPE
JIFFY LUBE	4,642 SF

ENGINEER
CEI ENGINEERING ASSOCIATES, INC
TRAVIS ALLEY
PROJECT MANAGER
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
TALLEY@CEIENG.COM
PHONE: (479) 273-9472

OWNER
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CHRIS JOHNSON
NORTHWEST ARKANSAS
CHRIS.JOHNSON@ODYSSEYSERVICESGROUP.COM
PHONE: (479) 402-4652

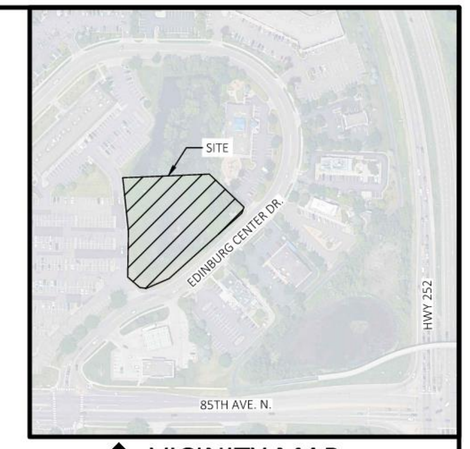
ARCHITECT
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NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

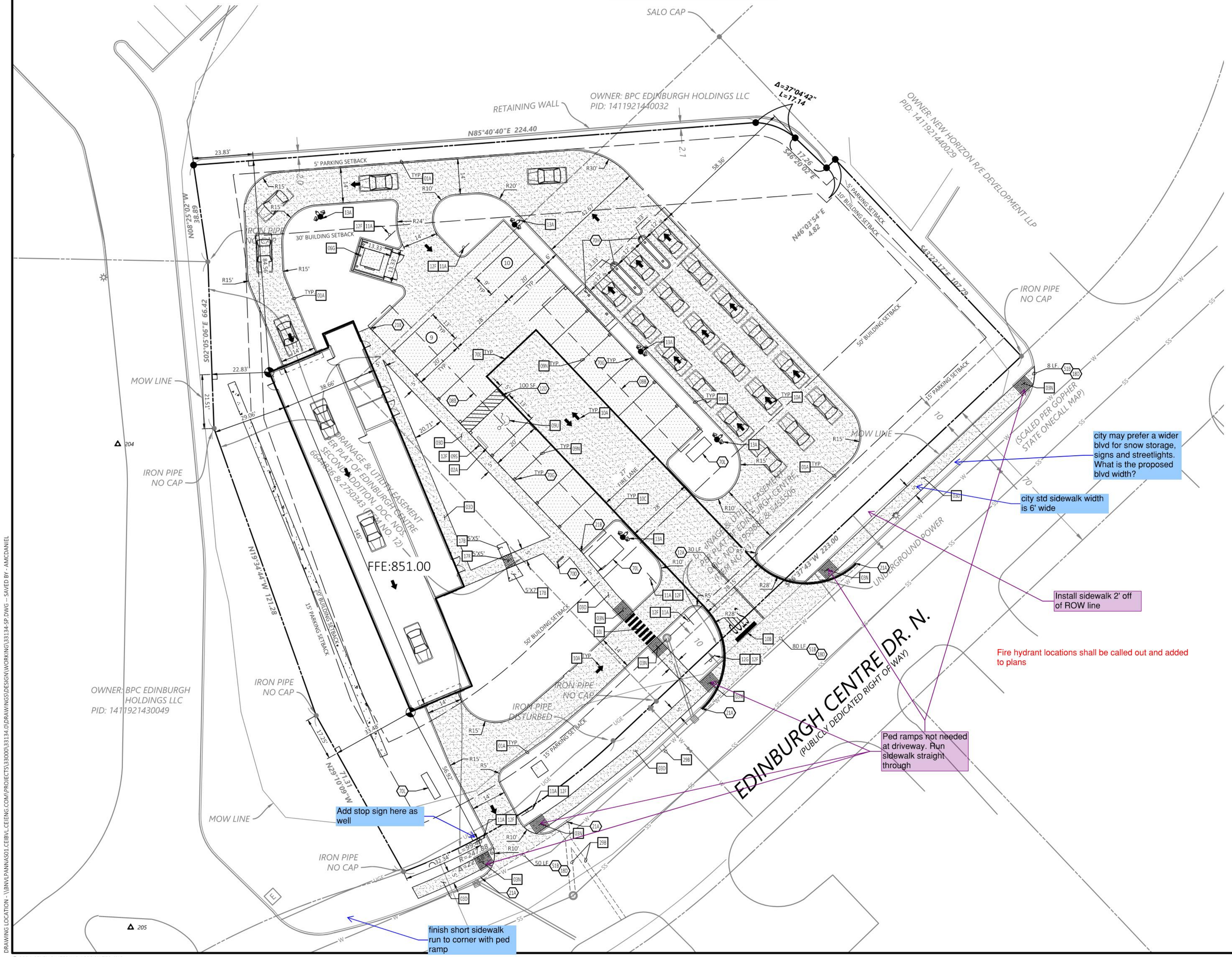
SITE BENCHMARK
SITE BENCHMARK #1: BM-251, ELEV.=854.91', HYDRANT SOUTHWEST OF SITE

0 20' 30' 40'
SCALE IN FEET

Know what's **below.** **Call** before you dig.



VICINITY MAP
NOT TO SCALE



LEGEND

EXISTING LEGEND

e	EAST OR ELECTRIC	OHT	OVERHEAD TELEPHONE
n	NORTH	OHTV	OVERHEAD TV
oh	OVERHEAD	X"SS	SANITARY SEWER
s	SOUTH OR SEWER	UGE	UNDERGROUND ELECTRIC
t	TELEPHONE	UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE
ug	UNDERGROUND	UGT	UNDERGROUND TELEPHONE
w	WEST OR WATER	UGTV	UNDERGROUND TV
	PROPERTY LINE	X"W	WATER
	RIGHT OF WAY LINE	.5-10-11 50.5	TREE INFO .5 = DIAMETER OF TRUNK IN FEET 10 = HEIGHT OF TREE IN FEET 11 = CANOPY DIAMETER IN FEET 50.5 = ELEVATION AT BASE OF TREE
	STORM DRAIN		
X"G	GAS		
OHE	OVERHEAD ELECTRIC		
OHE&T	OVERHEAD ELECTRIC AND TELEPHONE		

PROPOSED LEGEND

- PROPERTY LINE/RIGHT OF WAY LINE
- SETBACK LINE
- CONCRETE CURB AND GUTTER. SEE DETAIL PAVING PLAN
- BUILDING CONTROL POINT
- (#) PROPOSED PARKING SPACES
- LIMITS OF SIDEWALKS AND CONCRETE APRONS (PER ARCHITECTURAL PLANS)

GENERAL SITE NOTES

A. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

B. ALL CURB RETURN RADII SHALL BE 3', AS SHOWN TYPICAL ON THIS PLAN, UNLESS OTHERWISE NOTED.

C. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN THE SPECIFICATIONS: ALL CURB AND GUTTER ADJACENT TO CONCRETE PAVING SHALL BE INSTALLED PER DETAIL 01B. PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL 08C & 08E OVER THE ENTIRE PARKING LOT AREA AND ALL APPROACH DRIVES. ALL PARKING LOT STRIPING INCLUDING ACCESSIBLE AND VAN ACCESSIBLE SPACES SHALL BE PAINTED PER DETAIL: 09N.

D. ALL PARKING LOT SIGN BASE SUPPORTS SHALL BE INSTALLED PER DETAIL 12F.

E. ALL ACCESSIBLE PARKING STALLS SHALL HAVE SIGNAGE INSTALLED PER DETAIL 09S.

F. PRIOR TO ANY CONSTRUCTION IN RIGHT-OF-WAY, CONTRACTOR SHALL INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD.

SITE DETAILS

01A	TYPE A CONCRETE CURB AND GUTTER
02A	PRECAST CONCRETE WHEEL STOP
03A	WHEELCHAIR RAMP IN SIDEWALK
03D	CONCRETE SIDEWALK
03N	WHEELCHAIR RAMP IN SIDEWALK (TYPICAL AT EACH DRIVEWAY CURB RETURN)
06G	DUMPSTER ENCLOSURE
09N	90 DEGREE PARKING
09S	ACCESSIBLE / VAN ACCESSIBLE PARKING SIGN
09U	ACCESSIBLE PARKING SYMBOL
10A	TRAFFIC FLOW ARROW
10B	STOP BAR
10C	FIRE LANE MARKING
10J	CROSSWALK MARKING
11A	DO NOT ENTER SIGN
12F	SIGN BASE
12G	STOP SIGN
13A	TYPICAL LIGHTING POLE BASE DETAIL
17B	CONCRETE FLUME
17R	CONCRETE FLUME WITH STEEL PLATE
29B	CONCRETE STREET OR DRIVE CUT REPAIR.

SITE NOTES

02B	TRANSFORMER PAD (PER ELEC. CO. AND/OR ARCH. PLANS).
08B	OVERHEAD CANOPY - (TYP.-PER ARCH. PLANS).
12A	4 INCH TRAFFIC WHITE LANE STRIPE (SEE LENGTH INDICATED AT SYMBOL).
12D	4 INCH WIDE PAINTED WHITE STRIPES. 2.0 FOOT O.C. @ 45 DEGREES (SEE SIZE INDICATED AT SYMBOL).
13B	LIMITS OF HEAVY DUTY CONCRETE PAVING.
16E	MONUMENT SIGN.
18D	MATCH EXISTING PAVEMENT ELEVATIONS.
21A	TAPER CURB TO MATCH EXISTING CURB.
21B	TAPER CURB FROM 6 INCHES TO 0 INCHES OVER 2 FEET.
51B	LIMITS OF SAWCUT AND PAVEMENT REMOVAL.
70A	VACUUM ENCLOSURE (SEE ARCH. PLANS)
70D	BICYCLE RACK. (SEE ARCH PLANS)
70G	CANOPY COLUMNS (SEE ARCH. PLANS).
70H	PAY KIOSK ISLAND (SEE ARCH. PLANS).
70L	VACUUM SEPARATOR (SEE ARCH PLANS).

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E. DIEHL
LICENSED PROFESSIONAL ENGINEER
59050
STATE OF MINNESOTA

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEAN FREAK CARWASH POWERED BY CIRCLE K

EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

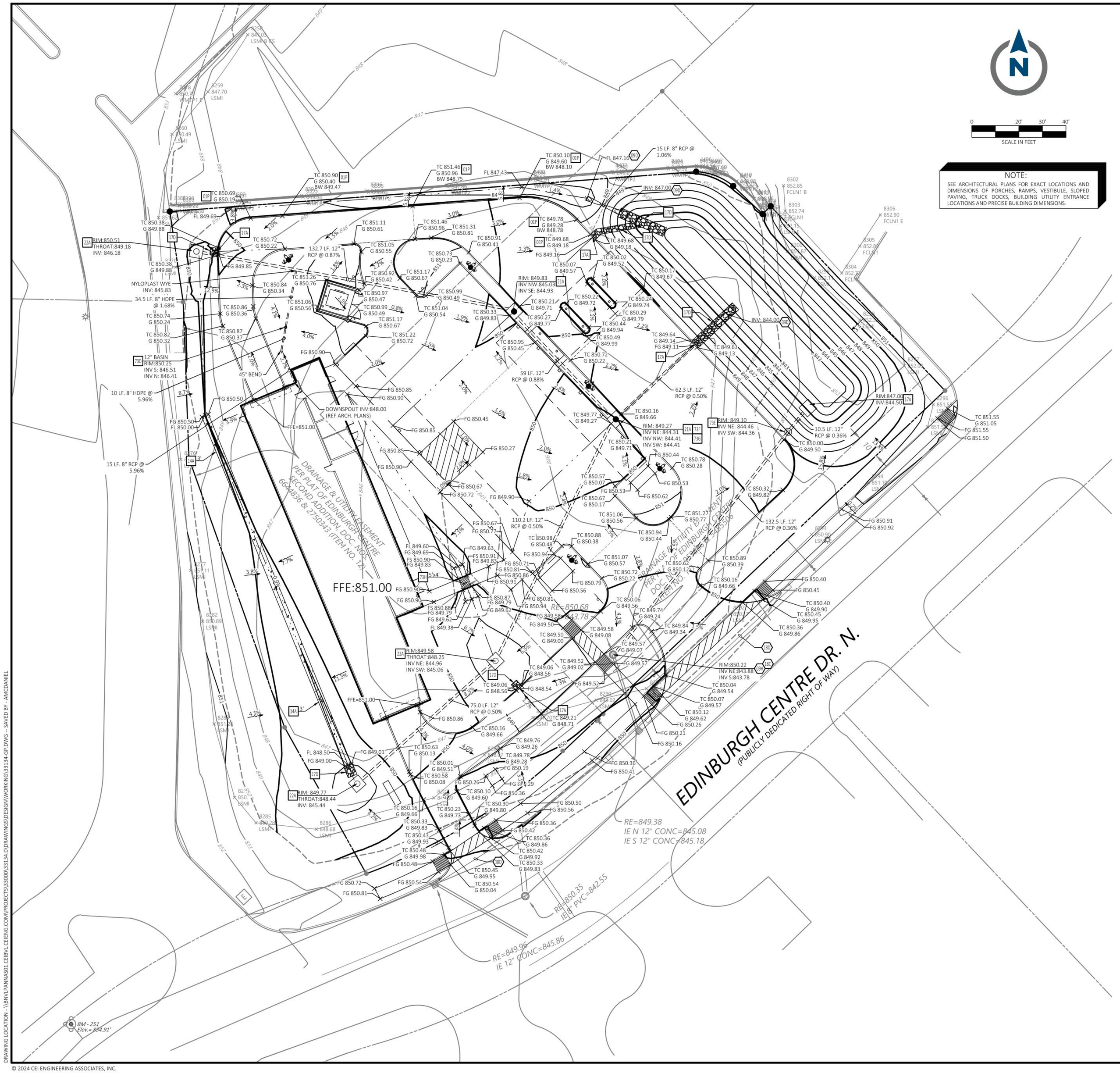
SITE PLAN
SHEET TITLE

SHEET NUMBER
C2.0

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5.2D - PLAN SET

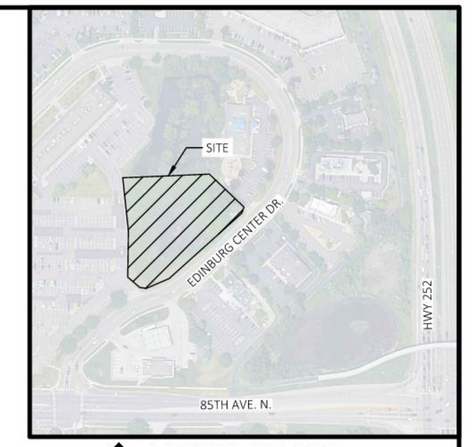


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SCALE IN FEET

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SITE BENCHMARK
SITE BENCHMARK #1: BM-251, ELEV.=854.91': HYDRANT SOUTHWEST OF SITE



VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING LEGEND

e	EAST OR ELECTRIC	OHT	OVERHEAD TELEPHONE
n	NORTH	OHTV	OVERHEAD TV
oh	OVERHEAD	X"SS	SANITARY SEWER
s	SOUTH OR SEWER	UGE	UNDERGROUND ELECTRIC
t	TELEPHONE	UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE
ug	UNDERGROUND	UGT	UNDERGROUND TELEPHONE
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	PROPERTY LINE	X"W	WATER
	RIGHT OF WAY LINE	.5-10-11 50.5	TREE INFO .5 = DIAMETER OF TRUNK IN FEET 10 = HEIGHT OF TREE IN FEET 11 = CANOPY DIAMETER IN FEET 50.5 = ELEVATION AT BASE OF TREE
	STORM DRAIN		
X"G	GAS		
OHE	OVERHEAD ELECTRIC		
OHE&T	OVERHEAD ELECTRIC AND TELEPHONE		

PROPOSED LEGEND

	PROPERTY LINE/RIGHT OF WAY LINE	x XX.XX	SPOT ELEVATIONS: TC = TOP OF CURB G = GUTTER FG = FINISHED GRADE (NATURAL GROUND) FS = FINISHED SURFACE (PAVEMENT) FFE = FINISHED FLOOR ELEVATION FL = FLOW LINE
	GRADE BREAK (RIDGE)		
	GRADE BREAK (FLOWLINE)		
XXX	CONTOUR ELEVATIONS		
	STORM DRAIN		
	AREA INLET		
	CURB INLET		
	FLARED END SECTION		

GENERAL GRADING NOTES

A. PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL CROSSINGS AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED OF DESIGN CONFLICTS.

B. CONTRACTOR HAS THE OPTION TO BID THE FOLLOWING MATERIAL FOR THE STORM SEWER SYSTEM: RCP, CPP, PP OR HDPE AS INDICATED ON THIS PLAN WHERE THE WORD PIPE IS USED. ALL PIPE LOCATED WITHIN THE RIGHT OF WAY SHALL BE RCP. ALL PIPES SHALL HAVE A MAXIMUM ROUGHNESS COEFFICIENT ("N") OF 0.013 AND SHALL MEET OR EXCEED THE PIPE MANUFACTURERS REQUIREMENTS FOR MINIMUM AND MAXIMUM COVER. CONTRACTOR SHALL REFER TO THE SITEWORK SPECIFICATION SECTION FOR STORM SEWER SYSTEMS FOR ACCEPTABLE TYPE AND MATERIAL.

C. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND 4" OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS (SEE LANDSCAPE PLAN FOR SEED MIX AND PROPER APPLICATION RATE). ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

D. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

E. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN THE SPECIFICATIONS: ALL STORM DRAIN PIPE BEDDING SHALL BE INSTALLED PER DETAIL 28A. ALL STORM DRAIN PIPES ARE MEASURED FROM CENTER OF STRUCTURES AND ENDS OF FLARED END SECTIONS.

F. PRIOR TO ANY CONSTRUCTION IN RIGHT-OF-WAY, CONTRACTOR SHALL INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD.

GRADING DETAILS

17A CURB CUT
17D RIP RAP PAD
21A CURB INLET
22A AREA INLET
26C DETENTION BASIN OUTFALL STRUCTURE
73D NYLOPLAST DRAIN BASIN WITH DOME GRATE (SEE SIZES THIS SHEET)
73E 36" "CS-3 CASCADE SEPARATOR" WITH SOLID COVER.
73F "36FTB SNOUT OIL & DEBRIS STOP"
73G OIL-DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)
73H SIDEWALK/CONCRETE SWALE W/ STEEL PLATE

GRADING NOTES

09H REMOVE TOP OF EXISTING DRAINAGE STRUCTURE. RECONSTRUCT TOP AND RIM TO MATCH FINISH GRADE.
18C CONNECT TO EXISTING STORM DRAIN MANHOLE OR INLET.
18D MATCH EXISTING PAVEMENT ELEVATIONS.

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E DIEHL — LICENSED PROFESSIONAL ENGINEER 59050 — STATE OF MINNESOTA

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
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REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH
Powered by CIRCLE K

POWERED BY CIRCLE K

CLEAN FREAK CARWASH

EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

GRADING PLAN
SHEET TITLE

SHEET NUMBER
C3.0

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5.2D - PLAN SET

GENERAL EROSION NOTES CONT'D

MAINTENANCE
ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT GREATER THAN 0.5-INCHES, AND SHOULD BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR SHALL BE REPLACED IF THEY SHOW SIGNS OF DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
3. SILT FENCES AND WATTLES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES AND WATTLES WHEN IT REACHES ONE-THIRD TO ONE-HALF THE HEIGHT OF THE BMP.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT IN THE SEDIMENTATION BASINS SHALL NOT EXCEED A DEPTH OF APPROXIMATELY 50% OF THE STORAGE VOLUME.
7. IF THE STONES IN THE GRAVEL INLET SEDIMENT FILTERS OR ROCK CHECK DAMS BECOME CLOGGED WITH SEDIMENT, THE STONES MUST BE PULLED AWAY, CLEANED AND REPLACED.
8. THE EMBANKMENT OF THE SEDIMENTATION BASIN SHALL BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
9. SEDIMENT IN THE TEMPORARY SEDIMENT TRAP SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS REACHED A DEPTH OF APPROXIMATELY 50% OF THE STORAGE VOLUME.
10. THE TEMPORARY SEDIMENT TRAP AND SEDIMENTATION BASIN STRUCTURES SHALL BE CHECKED REGULARLY TO ENSURE THAT THEY ARE STRUCTURALLY SOUND AND HAVE NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
11. DIVERSION DIKES AND/OR DITCHES SHALL BE CHECKED REGULARLY FOR EROSION AND SCOUR. ANY ERODED AREAS FOUND MUST BE IMMEDIATELY REPAIRED.
12. CONCRETE WASHOUT AREAS SHALL BE CHECKED REGULARLY FOR LEAKS AND CAPACITY. ALL LEAKS MUST BE REPAIRED IMMEDIATELY. WHEN THE WASHOUT VOLUME HAS BEEN REDUCED BY 85%, THE BMP MUST BE REMOVED AND REPLACED.

GENERAL EROSION NOTES

A. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE STATE OF MINNESOTA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

B. A COPY OF THE SWPPP AND EROSION CONTROL PLANS, INCLUDING APPLICABLE DETAIL SHEETS, MUST REMAIN ONSITE THROUGHOUT CONSTRUCTION AND MADE AVAILABLE TO THE PUBLIC UNTIL THE SITE IS TERMINATED AND/OR PERMANENTLY STABILIZED PER THE NPDES PERMIT.

C. THE CONTRACTOR MUST UPDATE THE SWPPP AND EROSION CONTROL PLANS TO REFLECT THE PROGRESS OF CONSTRUCTION AND GENERAL CHANGES TO THE PROJECT SITE. CHANGES MAY INCLUDE BMP INSTALLATION, MODIFICATION, OR REMOVAL, CONSTRUCTION ACTIVITIES, CLEARING, GRUBBING, OR GRADING, AND TEMPORARY OR PERMANENT STABILIZATION.

D. THE CONTRACTOR MUST ADHERE TO ANY HOURS OF WORK, NOISE LEVEL, OR OTHER CONSTRUCTION RELATED RESTRICTIONS IN ACCORDANCE WITH LOCAL OR STATE REGULATIONS.

E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ANY OFFSITE BORROW, SPOIL, OR STORAGE AREAS TO BE UTILIZED, BUT NOT PROVIDED WITHIN THE PROJECT'S LIMITS OF DISTURBANCE, ARE TO BE PROPERLY LICENSED AND PERMITTED.

F. THE NPDES PERMIT DOES ALLOW CERTAIN NON-STORMWATER DISCHARGES AT THE CONSTRUCTION SITE, SEE NPDES PERMIT, SECTION THREE (3) FOR A COMPLETE LIST OF PERMITTED DISCHARGES. THESE DISCHARGES MUST BE TREATED BY AN ONSITE BMP PRIOR TO LEAVING THE SITE AND MUST NOT CAUSE EROSION OR DAMAGE TO DOWNSTREAM PROPERTIES AND INFRASTRUCTURE. ALL OTHER DISCHARGES ARE STRICTLY PROHIBITED UNLESS AN APPLICABLE PERMIT HAS BEEN OBTAINED PRIOR TO THE DISCHARGE BY THE CONTRACTOR.

G. THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EQUIPMENT CLEANING AREA, EMPLOYEE BREAK AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS AND TOILET FACILITIES. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER AND DEPICTED ON THE ONSITE EROSION CONTROL PLAN.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

I. MAINTAIN ON THE SITE OR HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. ADEQUATE HOUSEKEEPING MEASURES SHALL BE IMPLEMENTED SO THAT LOOSE TRASH, MATERIALS, TOOLS, AND EQUIPMENT ARE COLLECTED AND PROPERLY STORED AT THE CONSTRUCTION SITE.

K. DUST ON THE SITE SHALL BE CONTROLLED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

L. NO RUBBISH, TRASH, GARBAGE OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES, DRAINAGE STRUCTURES, OR WATERS OF THE STATE.

M. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WILL STOP FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY STABILIZED IMMEDIATELY.

O. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IMMEDIATELY, BUT NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE LANDSCAPING PLAN.

P. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE EXACT LOCATIONS SHALL BE COORDINATED WITH THE OWNER'S CONSTRUCTION MANAGER.

Q. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

R. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AFTER THE STABILIZATION OF THE SITE AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS.

S. IF SOIL STOCKPILING IS EMPLOYED ON THE SITE, SILT FENCES SHALL BE USED TO HELP CONTAIN THE SEDIMENT.

T. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

U. SEDIMENT BASINS AND TRAPS ARE ATTRACTIVE TO CHILDREN AND CAN BE VERY DANGEROUS. IN ALL CASES, LOCAL AND/OR STATE ORDINANCES AND REGULATIONS REGARDING HEALTH AND SAFETY MUST BE ADHERED TO.

V. ALL EXISTING AND PROPOSED STORM SEWER PIPES, DRAINAGE STRUCTURES, AND DRAINAGE DITCHES WITHIN THE PROJECT AREA SHALL BE CLEANED OF ANY TRASH AND ACCUMULATED SEDIMENT PRIOR TO FINAL STABILIZATION.

W. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

X. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, WATTLES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

Y. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR STORM DRAINS & UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

Z. IN AN EMERGENCY SITUATION, THE CONTRACTOR IS RESPONSIBLE FOR MODIFYING OR ADDING BMPS NECESSARY TO STOP POLLUTANT OR SEDIMENT DISCHARGES FROM THE CONSTRUCTION SITE AND PROTECT THE WATER QUALITY OF THE RECEIVING WATERBODY.

AA. IF AN EXCAVATION NEEDS TO BE DEWATERED DUE TO A RECENT RAINFALL EVENT, THE CONTRACTOR CAN DEWATER THE EXCAVATION VIA A PUMPED FILTER BAG. THE PUMPED FILTER BAG MUST DISCHARGE ONTO A STABILIZED SURFACE AND UPSTREAM OF AN EROSION CONTROL BMP LIKE A SEDIMENT BASIN/TRAP, SILT FENCE, OR OTHER PERIMETER BMP. IT IS STRICTLY PROHIBITED TO DISCHARGE THE PUMPED FILTER BAG INTO A STORM DRAIN OR OTHER CONVEYANCE STRUCTURE WITHOUT THE RUNOFF BEING TREATED VIA AN EROSION CONTROL BMP FIRST.

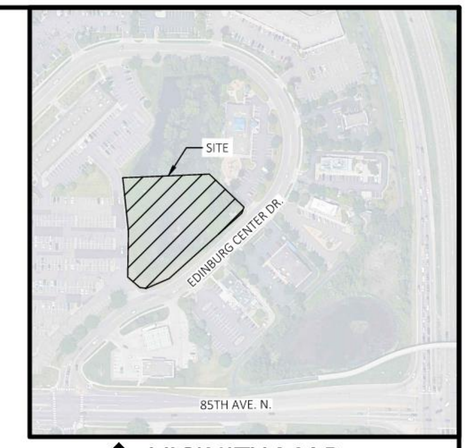


0 20' 30' 40'
SCALE IN FEET

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

811 Know what's below. Call before you dig.

SITE BENCHMARK
SITE BENCHMARK #1: BM-251, ELEV.=854.91': HYDRANT SOUTHWEST OF SITE



VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING LEGEND

e	EAST OR ELECTRIC	OHT	OVERHEAD TELEPHONE
n	NORTH	OHTV	OVERHEAD TV
oh	OVERHEAD	X"SS	SANITARY SEWER
s	SOUTH OR SEWER	UGE	UNDERGROUND ELECTRIC
t	TELEPHONE	UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE
ug	UNDERGROUND	UGT	UNDERGROUND TELEPHONE
w	WEST OR WATER	UGTV	UNDERGROUND TV
	PROPERTY LINE	X"W	WATER
	RIGHT OF WAY LINE	.5-10-11 50.5	TREE INFO .5 = DIAMETER OF TRUNK IN FEET 10 = HEIGHT OF TREE IN FEET 11 = CANOPY DIAMETER IN FEET 50.5 = ELEVATION AT BASE OF TREE
	STORM DRAIN		
X"G	GAS		
OHE	OVERHEAD ELECTRIC		
OHE&T	OVERHEAD ELECTRIC AND TELEPHONE		

PROPOSED LEGEND

	PROPERTY LINE/RIGHT OF WAY LINE
	LIMITS OF DISTURBANCE
XXX	CONTOUR ELEVATIONS
	GRADE BREAK
	FLOWLINE
	STRAW WATTLE
	STORM DRAIN
SF	SILT FENCE
	ROCK CHECK DAM
	COMBINATION INLET
	FLARED END SECTION
	GREASE TRAP / OIL & WATER SEPARATOR / SAMPLE WELL BASIN
	CONCRETE WASHOUT
	CONSTRUCTION ENTRANCE
	INLET PROTECTION
	SWP-CI (BIG RED)

AREA OF DISTURBANCE = 1.62 ACRES (70,567 S.F.)

SOIL TYPES

U2A — UDORTHENTS,WET SUBSTRATUM. 0 TO 2 PERCENT SLOPES

EROSION DETAILS

75C SWP-CI (BIG RED) OR APPROVED EQUIVALENT
80E TEMPORARY GRAVEL CURB INLET SEDIMENT FILTER
80F TEMPORARY SILT FENCE INLET PROTECTION
82H ROCK CHECK DAM
84A TEMPORARY SILT FENCE
85A TEMPORARY STONE CONSTRUCTION ENTRANCE
85C TEMPORARY CONCRETE WASH OUT.

SEQUENCE OF CONSTRUCTION
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. CONSTRUCT THE SILT FENCES ON THE SITE.
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.
4. CONSTRUCT THE TEMPORARY SEDIMENT TRAP BASIN AND PERMANENT SWALE.
5. INSTALL ROCK CHECK DAMS IN PERMANENT SWALES.
6. CLEAR AND GRUB THE SITE.
7. BEGIN GRADING THE SITE.
8. AS GRADING PROGRESSES, INSTALL WATTLES AT NEWLY CONSTRUCTED ENTRANCES.
9. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
10. TEMPORARILY SEED DENUDED AREAS.
11. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
12. INSTALL INLET PROTECTION DEVICES AT INLETS AND BIG REDS AT CURB CUTS.
13. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
14. PREPARE SITE FOR PAVING.
15. PAVE SITE.
16. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
17. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED).

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Andrew Diehl
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E DIEHL — LICENSED PROFESSIONAL ENGINEER — 59050 — STATE OF MINNESOTA

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH
Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K
CLIENT 2
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

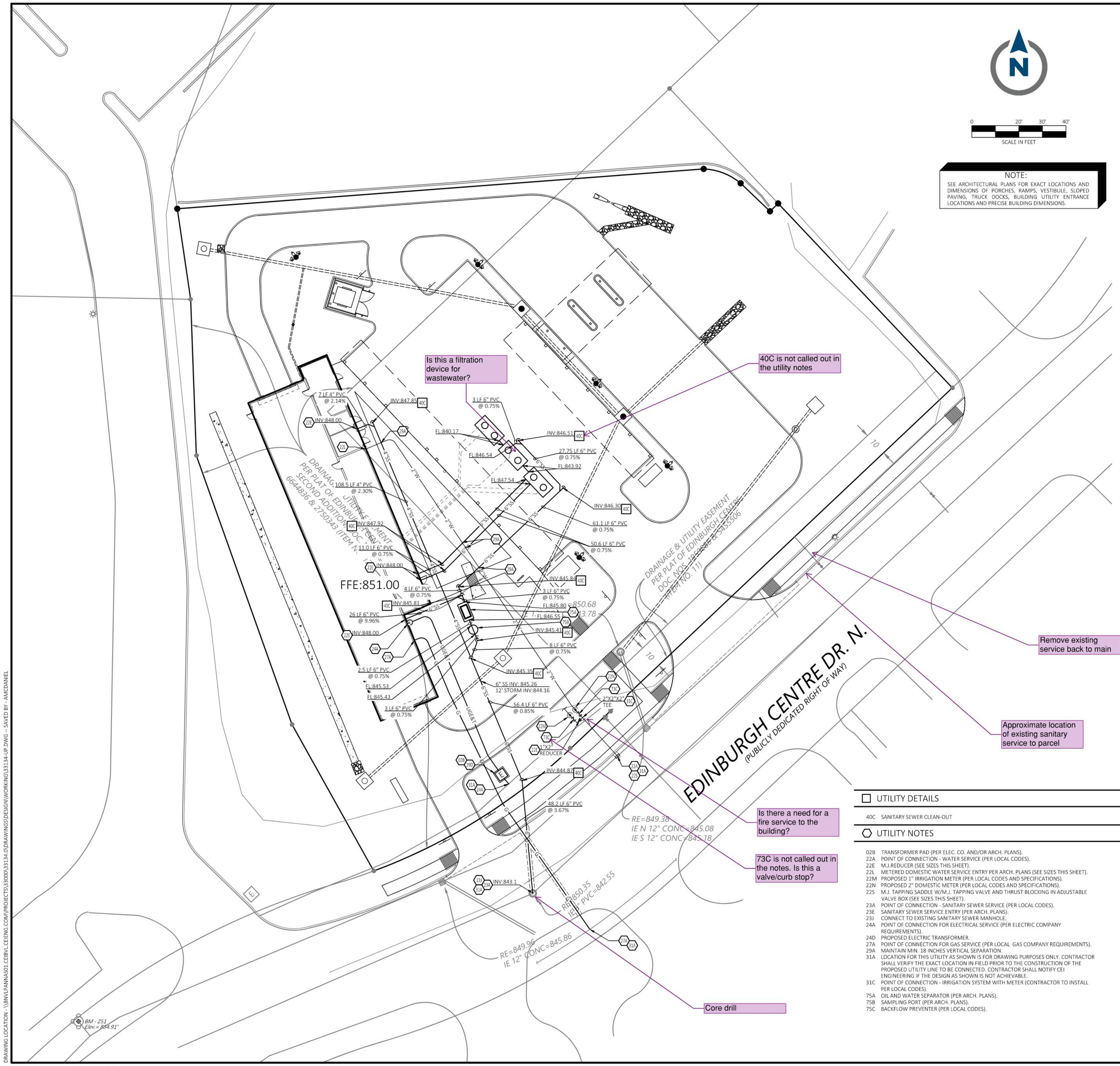
EROSION CONTROL PLAN
SHEET TITLE

SHEET NUMBER
C4.0

DRAWING LOCATION - \\BNV\PANNASOL\CEBVL.CEIENG.COM\PROJECTS\33000\33134.01\DRAWINGS\DESIGN\WORKING\33134-GP DWG - SAVED BY - AM/CDANIEL

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5.2D - PLAN SET



LEGEND

EXISTING LEGEND

e	EAST OR ELECTRIC	OHT	OVERHEAD TELEPHONE
n	NORTH	OHTV	OVERHEAD TV
oh	OVERHEAD	X"SS	SANITARY SEWER
s	SOUTH OR SEWER	t	TELEPHONE
UGE	UNDERGROUND ELECTRIC	ug	UNDERGROUND
UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE	w	WEST OR WATER
UGT	UNDERGROUND TELEPHONE		PROPERTY LINE
UGTV	UNDERGROUND TV		RIGHT OF WAY LINE
X"W	WATER		STORM DRAIN
X"G	GAS	.5-10-11 50.5	TREE INFO .5 = DIAMETER OF TRUNK IN FEET 10 = HEIGHT OF TREE IN FEET 11 = CANOPY DIAMETER IN FEET 50.5 = ELEVATION AT BASE OF TREE
OHE	OVERHEAD ELECTRIC		
OHE&T	OVERHEAD ELECTRIC AND TELEPHONE		

PROPOSED LEGEND

	PROPERTY LINE/RIGHT OF WAY LINE		COMBINATION INLET
	STORM DRAIN		FLARED END SECTION
X"G	GAS SERVICE		GREASE TRAP / OIL & WATER SEPARATOR / SAMPLE WELL BASIN
UGE	UNDERGROUND ELECTRIC SERVICE		*ADD OWS JUST AFTER FIRST ROW OF PARKING*
UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE SERVICE		
UGT	UNDERGROUND TELEPHONE SERVICE		
X"SS	SANITARY SEWER SERVICE		
X"W	WATER SERVICE		

GENERAL UTILITY NOTES

A. ALL WATER LINES SHALL BE "TYPE K" COPPER WITH 36" MIN. COVER.

B. ALL SANITARY SEWER LINES SHALL BE SDR 35 WITH 36" MIN. COVER.

C. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.

D. ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.

E. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.

F. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM CEI ENGINEERING AND THE OWNER/DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. CEI ENGINEERING AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.

G. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN SPECIFICATIONS: ALL WATER LINE FITTINGS SHALL BE INSTALLED WITH THRUST BLOCKING PER DETAIL 31C. ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42A. ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL 42B.

H. PRIOR TO ANY CONSTRUCTION IN RIGHT-OF-WAY, CONTRACTOR SHALL INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD.

I. MAINTAIN A MINIMUM 6" SEPARATION BETWEEN ALL UTILITIES, UNLESS SPECIFICALLY CALLED OUT OTHERWISE ON THE PLAN.

UTILITY DETAILS

40C SANITARY SEWER CLEAN-OUT

UTILITY NOTES

028 TRANSFORMER PAD (PER ELEC. CO. AND/OR ARCH. PLANS).
22A POINT OF CONNECTION - WATER SERVICE (PER LOCAL CODES).
22E M.J.REDUCER (SEE SIZES THIS SHEET).
22L METERED DOMESTIC WATER SERVICE ENTRY PER ARCH. PLANS (SEE SIZES THIS SHEET).
22M PROPOSED 1" IRRIGATION METER (PER LOCAL CODES AND SPECIFICATIONS).
22N PROPOSED 2" DOMESTIC METER (PER LOCAL CODES AND SPECIFICATIONS).
22S M.J. TAPPING SADDLE W/M.J. TAPPING VALVE AND THRUST BLOCKING IN ADJUSTABLE VALVE BOX (SEE SIZES THIS SHEET).
23A POINT OF CONNECTION - SANITARY SEWER SERVICE (PER LOCAL CODES).
23E SANITARY SEWER SERVICE ENTRY (PER ARCH. PLANS).
23I CONNECT TO EXISTING SANITARY SEWER MANHOLE.
24A POINT OF CONNECTION FOR ELECTRICAL SERVICE (PER ELECTRIC COMPANY REQUIREMENTS).
24D PROPOSED ELECTRIC TRANSFORMER.
27A POINT OF CONNECTION FOR GAS SERVICE (PER LOCAL GAS COMPANY REQUIREMENTS).
29A MAINTAIN MIN. 18 INCHES VERTICAL SEPARATION.
31A LOCATION FOR THIS UTILITY AS SHOWN IS FOR DRAWING PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY LINE TO BE CONNECTED. CONTRACTOR SHALL NOTIFY CEI ENGINEERING IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.
31C POINT OF CONNECTION - IRRIGATION SYSTEM WITH METER (CONTRACTOR TO INSTALL PER LOCAL CODES).
75A OIL AND WATER SEPARATOR (PER ARCH. PLANS).
75B SAMPLING PORT (PER ARCH. PLANS).
75C BACKFLOW PREVENTER (PER LOCAL CODES).

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E DIEHL
LICENSED PROFESSIONAL ENGINEER
59050
STATE OF MINNESOTA

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

CLEAN FREAK CARWASH POWERED BY CIRCLE K
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

PRELIMINARY
NOT FOR
CONSTRUCTION

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/4/2024
REVISION	REV-0

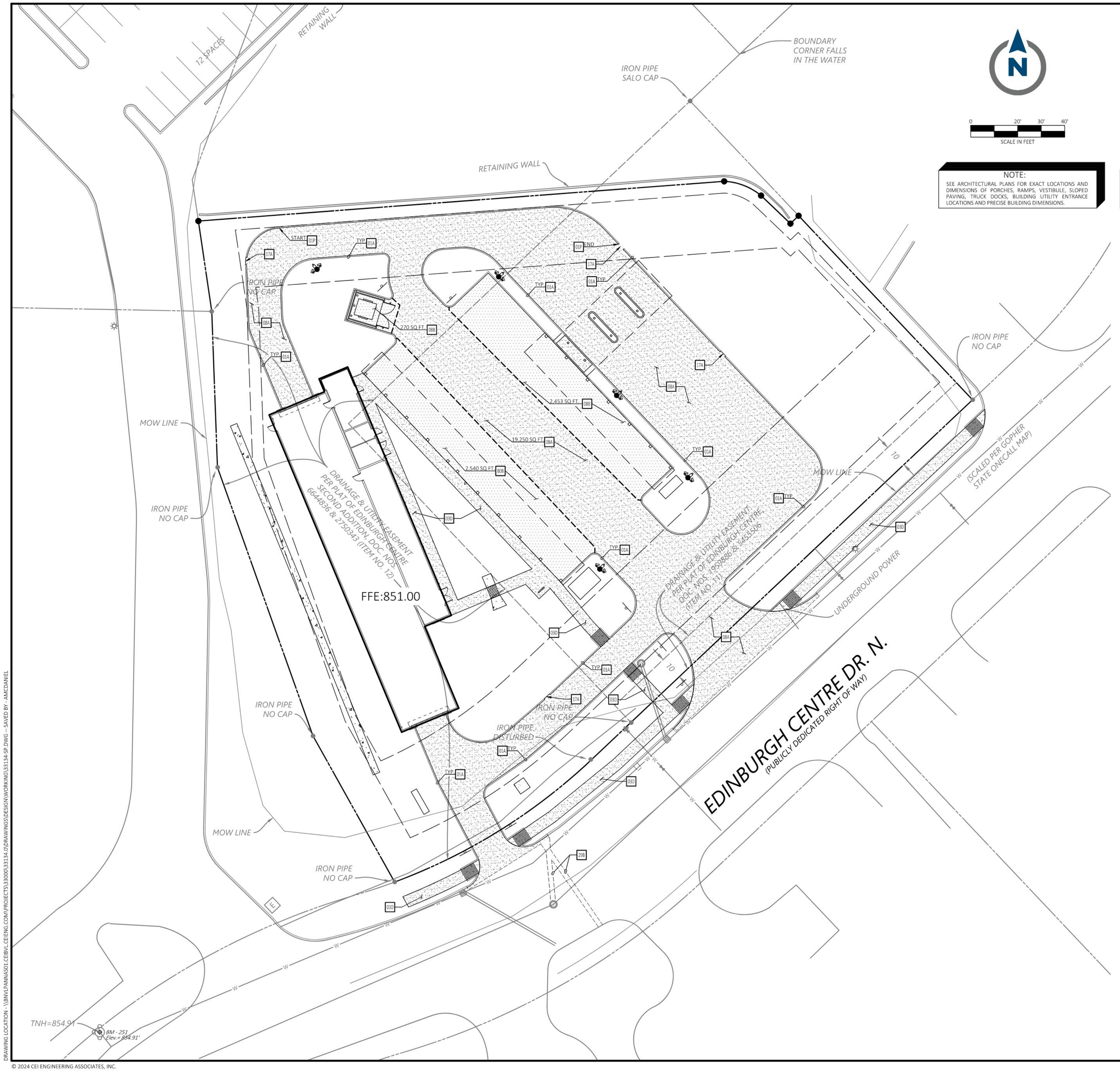
UTILITY PLAN
SHEET TITLE

SHEET NUMBER
C5.0

DRAWING LOCATION - \\BNV\PANNAS01 CERV\...CEIENG.COM\PROJECTS\33000\33134.0\DRAWINGS\DESIGN\WORKING\33134-UP.DWG — SAVED BY - AMCDANIEL

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5.2D - PLAN SET

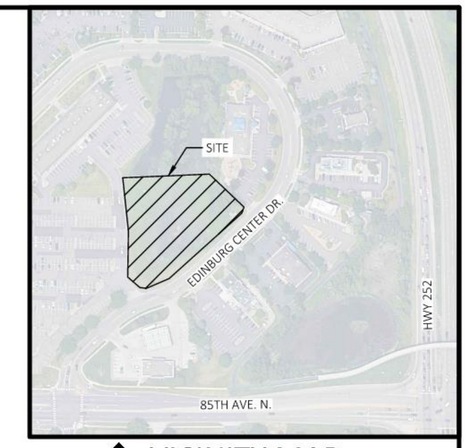


0 20' 30' 40'
SCALE IN FEET

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

811 Know what's **below.** **Call** before you dig.

SITE BENCHMARK
SITE BENCHMARK #1: BM-251; ELEV.=854.91'; HYDRANT SOUTHWEST OF SITE



VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING LEGEND

e	EAST OR ELECTRIC	OHT	OVERHEAD TELEPHONE
n	NORTH	OHTV	OVERHEAD TV
oh	OVERHEAD	X"SS	SANITARY SEWER
s	SOUTH OR SEWER	UGE	UNDERGROUND ELECTRIC
t	TELEPHONE	UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE
ug	UNDERGROUND	UGT	UNDERGROUND TELEPHONE
w	WEST OR WATER	UGTV	UNDERGROUND TV
	PROPERTY LINE	X"W	WATER
	RIGHT OF WAY LINE	X"G	GAS
	STORM DRAIN	OHE	OVERHEAD ELECTRIC
		OHE&T	OVERHEAD ELECTRIC AND TELEPHONE

.5-10-11 50.5 — TREE INFO
.5 = DIAMETER OF TRUNK IN FEET
10 = HEIGHT OF TREE IN FEET
11 = CANOPY DIAMETER IN FEET
50.5 = ELEVATION AT BASE OF TREE

PROPOSED

- PROPERTY LINE/RIGHT OF WAY LINE
- CONCRETE CURB AND GUTTER. SEE DETAIL 01A/01B.
- COMBINATION INLET
- FLARED END SECTION
- GREASE TRAP / OIL & WATER SEPARATOR / SAMPLE WELL BASIN
- LIMITS OF SIDEWALKS
- LIMITS OF HEAVY ASPHALT PAVING (DETAIL 08B)
- LIMITS OF ASPHALT PAVING (DETAIL 08A)

GENERAL PAVING NOTES

A. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

B. PAVEMENT SECTION DESIGNS ARE TAKEN FROM THE GEOTECHNICAL INVESTIGATION REPORT AND ADDENDA AS PREPARED BY AMERICAN ENGINEERING TESTING, DATED JANUARY 9, 2023. REFERENCE GEOTECHNICAL REPORT FOR COMPLETE DESIGN SPECIFICATION AND DETAILED RECOMMENDATIONS.

C. WITHIN 24 HOURS PRIOR TO ANY PAVING ACTIVITIES, THE CONTRACTOR SHALL PERFORM SUBGRADE COMPACTION AND PROOF ROLL TESTS ON PREPARED SUBGRADE TO VERIFY THE SUBGRADE HAS NOT DETERIORATED DURING PROJECT CONSTRUCTION,

D. AFTER COMPLETING PAVING ACTIVITIES, THE CONTRACTOR IS RESPONSIBLE FOR HAVING PAVEMENT CORED UNDER SUPERVISION OF MATERIALS INSPECTOR AND SUBMITTING CORE RESULTS TO ENGINEER AND OWNER.

E. CONCRETE TO ASPHALT STANDARD PAVEMENT HEADER SHALL BE USED FOR ALL CONCRETE TO ASPHALT INTERFACES.

F. ALL AREAS WITH CONCRETE PAVING SHALL HAVE A "LIGHT BROOM" FINISH.

G. UNLESS OTHERWISE SHOWN, CALLED OUT OR SPECIFIED HEREON OR WITHIN THE SPECIFICATIONS:
- ALL CURB AND GUTTER ADJACENT TO ASPHALT PAVING SHALL BE INSTALLED PER DETAIL 01A.
- ALL CURB AND GUTTER ADJACENT TO CONCRETE PAVING SHALL BE INSTALLED PER DETAIL 01B.

H. PRIOR TO ANY CONSTRUCTION IN RIGHT-OF-WAY, CONTRACTOR SHALL INSTALL TRAFFIC CONTROL IN ACCORDANCE WITH MUTCD.

☐ PAVING DETAILS

01A TYPE A CONCRETE CURB AND GUTTER
01P RAISED CURB AND GUTTER
03D CONCRETE SIDEWALK
08A STANDARD DUTY ASPHALT PAVING
08B HEAVY DUTY ASPHALT PAVING
17A 36" CURB CUT
29B ASPHALT STREET OR DRIVE CUT REPAIR

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E DIEHL — LICENSED PROFESSIONAL ENGINEER — 59050 — STATE OF MINNESOTA

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH
Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K

EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

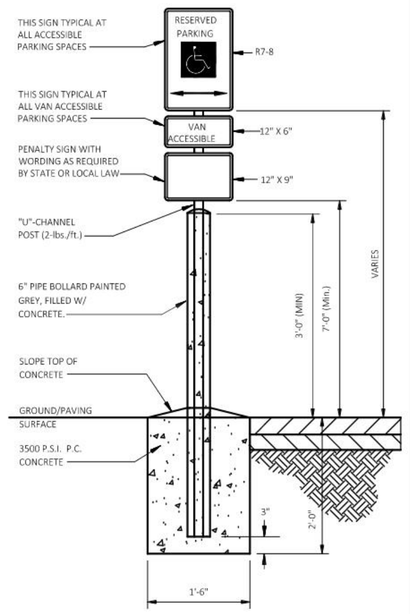
PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

PAVING PLAN
SHEET TITLE

SHEET NUMBER
C6.0

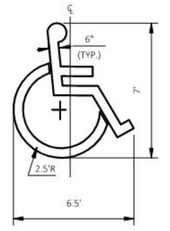
DRAWING LOCATION: \\BNV\PANNASOL.CEIBVL.CEIENG.COM\PROJECTS\33000\33134.01\DRAWINGS\DESIGN\WORKING\33134-SP.DWG -- SAVED BY - AMCDANIEL
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5.2D - PLAN SET



ACCESSIBLE / VAN ACCESSIBLE PARKING SIGN

N.T.S. 9S



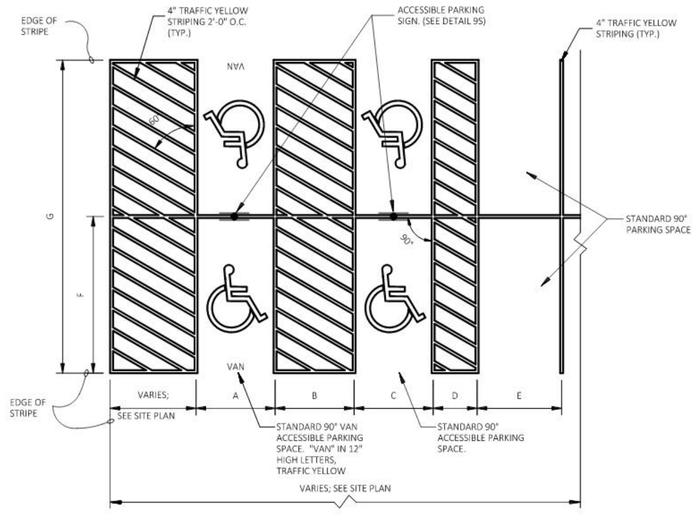
ACCESSIBLE PARKING SYMBOL

N.T.S. 9D

LOCATE 8' EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

NOTES:

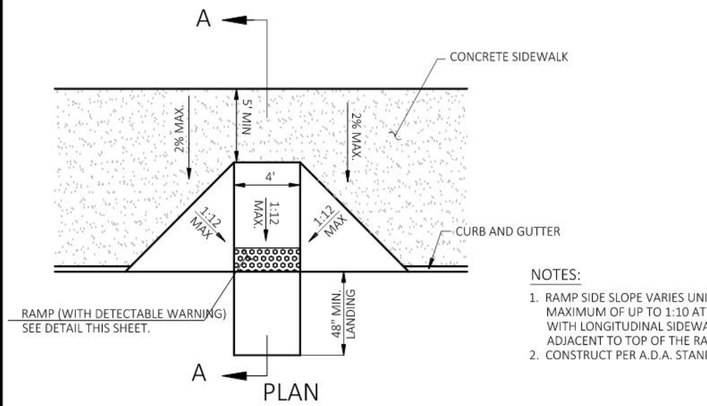
1. THIS DETAIL IS FOR DIMENSION PURPOSES ONLY. SEE SITE PLAN FOR EXACT LAYOUT.
2. ALL DIMENSIONS ARE TO 4" OF STRIPE UNLESS OTHERWISE INDICATED.
3. A MINIMUM 8' ACCESS AISLE SHALL BE PLACED ON PASSENGER SIDE OF VAN SPACES.
4. SEE SITE PLAN FOR TYPICAL DIMENSIONS OF STANDARD 90° PARKING STALLS.



DIMENSION CHART		
	STD. 90° VAN ACCESSIBLE	STD. 90°
A	13'	
B		
C		
D	5'	VARIES
E		13'
F	20'	20'
G		

90° PARKING, ACCESSIBLE PARKING AND "VAN" ACCESSIBLE PARKING SPACE STRIPING

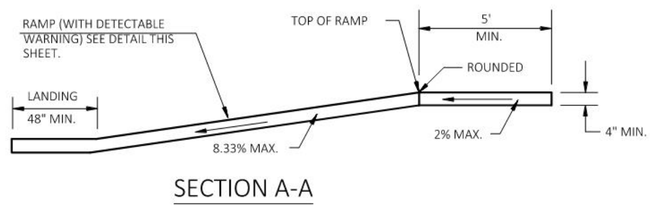
N.T.S. 9N



NOTES:

1. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 1:10 AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
2. CONSTRUCT PER A.D.A. STANDARDS.

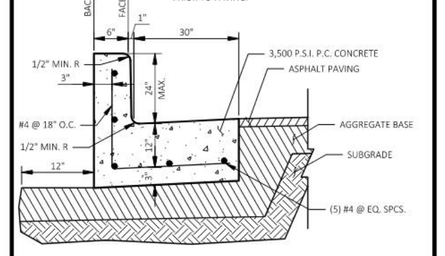
PLAN



SECTION A-A

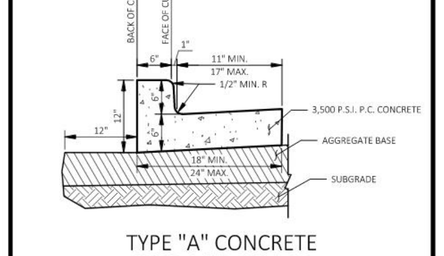
WHEELCHAIR RAMP IN SIDEWALK

N.T.S. 9A



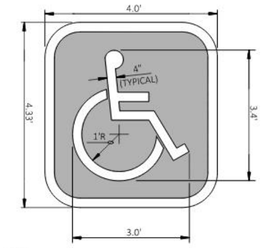
RAISED CURB AND GUTTER

N.T.S. 9P



TYPE "A" CONCRETE CURB AND GUTTER

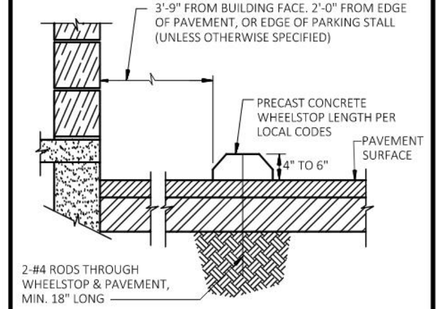
N.T.S. 9A



NOTES:
LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING. WHERE INDICATED "VAN" LETTERING SHALL BE WHITE 12" HIGH LETTERING CENTERED ON THE STALL. ALL STRIPING SHALL BE WHITE, THE INSIDE AREA OF THE SYMBOL SHALL BE BLUE.

ACCESSIBLE PARKING SYMBOL

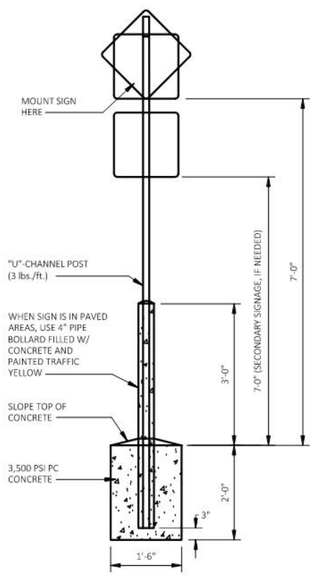
N.T.S. 9V



PRECAST CONCRETE WHEEL STOP

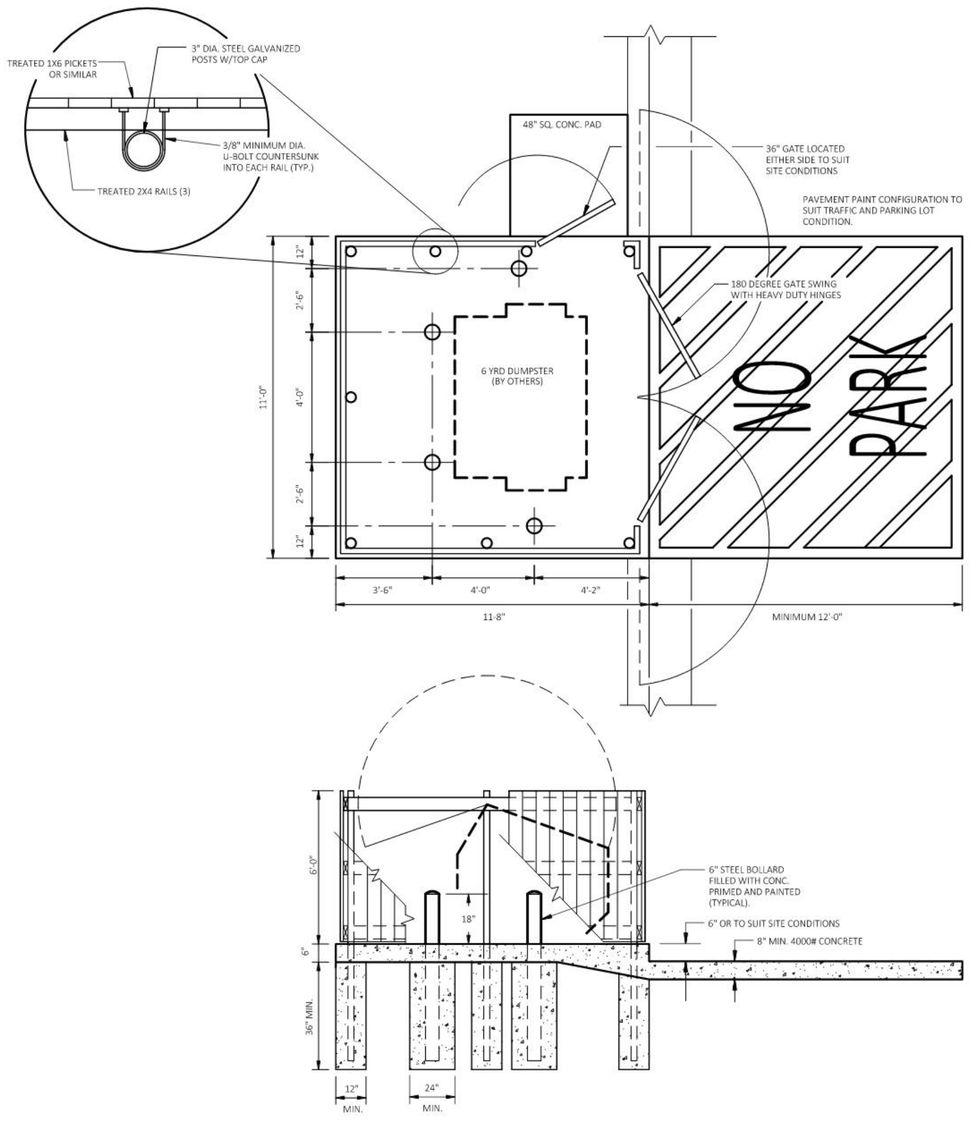
N.T.S. 9A

ALL SIGNS SHOULD COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



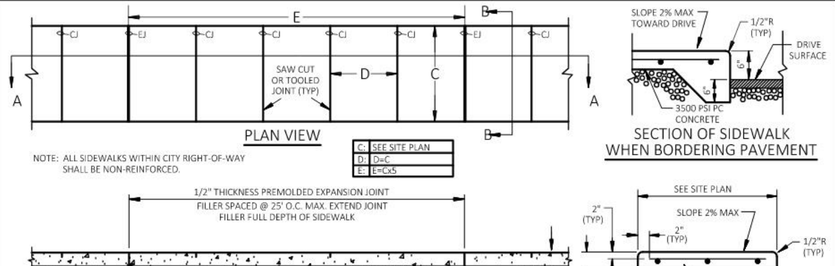
SIGN BASE

N.T.S. 12F



DUMPSTER ENCLOSURE

N.T.S. 9G



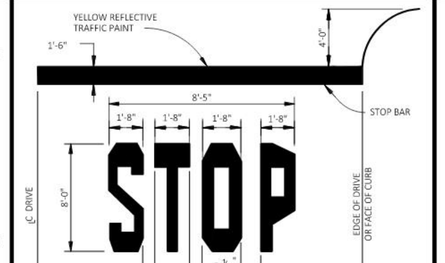
PLAN VIEW

SECTION A-A

CONCRETE SIDEWALK

N.T.S. 9W

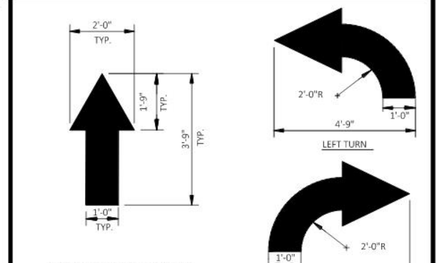
SECTION OF SIDEWALK WHEN BORDERING PAVEMENT



SECTION B-B

STOP BAR

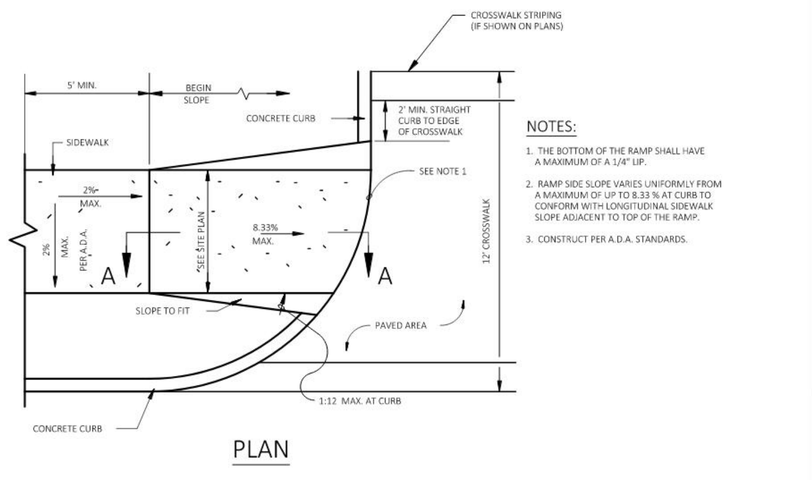
N.T.S. 10B



NOTE: ALL TRAFFIC FLOW ARROWS TO BE SOLID YELLOW REFLECTIVE TRAFFIC PAINT PER DIMENSIONS ABOVE.

TRAFFIC FLOW ARROW

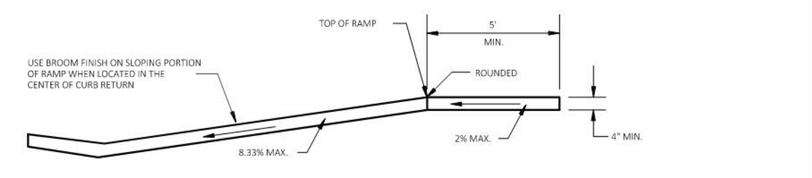
N.T.S. 10A



NOTES:

1. THE BOTTOM OF THE RAMP SHALL HAVE A MAXIMUM OF A 1/4" LIP.
2. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 8.33 % AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
3. CONSTRUCT PER A.D.A. STANDARDS.

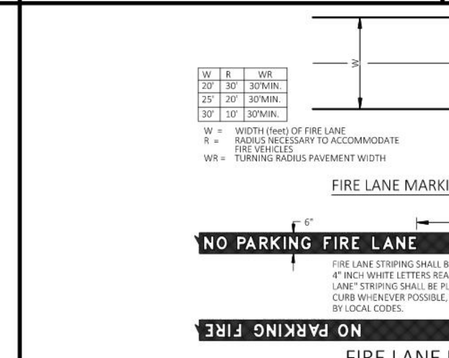
PLAN



SECTION A-A

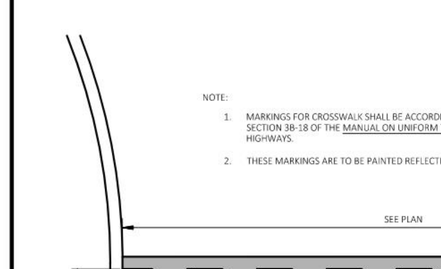
WHEELCHAIR RAMP IN SIDEWALK (TYPICAL AT EACH DRIVEWAY CURB RETURN)

N.T.S. 9N



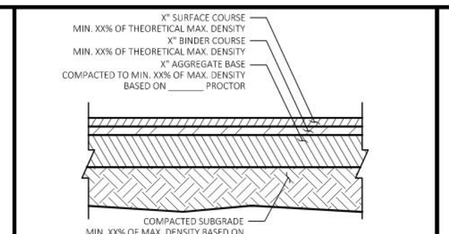
FIRE LANE MARKING

N.T.S. 10C



CROSSWALK MARKING

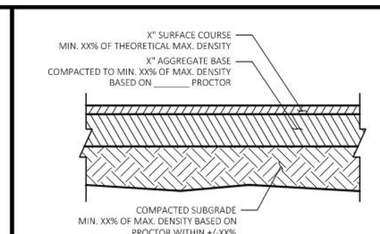
N.T.S. 10I



NOTES:
1. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED BY _____ REPORT DATED _____ PROJECT NUMBER _____, PRIOR TO CONSTRUCTION.

HEAVY DUTY ASPHALT PAVING

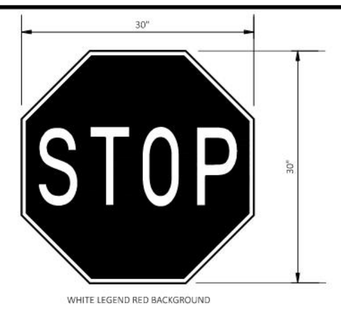
N.T.S. 9EB



NOTES:
1. CONTRACTOR SHALL VERIFY THE ABOVE DETAILS WITH THE SUBSURFACE EXPLORATION PREPARED BY _____ REPORT DATED _____ PROJECT NUMBER _____, PRIOR TO CONSTRUCTION.

STANDARD DUTY ASPHALT PAVING

N.T.S. 9EA



WHITE LEGEND RED BACKGROUND

R1-1

"STOP" SIGN

N.T.S. 12C



STANDARD RED AND WHITE SIGN

"DO NOT ENTER" SIGN

N.T.S. 11A

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Andrew E Diehl

Printed Name: **Andrew E Diehl**

Date: **01/05/2024**

License Number: **59050**

ANDREW E DIEHL LICENSED PROFESSIONAL ENGINEER 59050 STATE OF MINNESOTA

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DRAWING LOCATION - \\BNV\PANNAS01 CEIBVL-CEIFNS.COM\PROJECTS\33000\33134.0\DRAWINGS\DESIGN\WORKING\33134-CS.DWG -- SAVED BY - AMCDANIEL

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEAN FREAK CARWASH POWERED BY CIRCLE K
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

F-7524

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

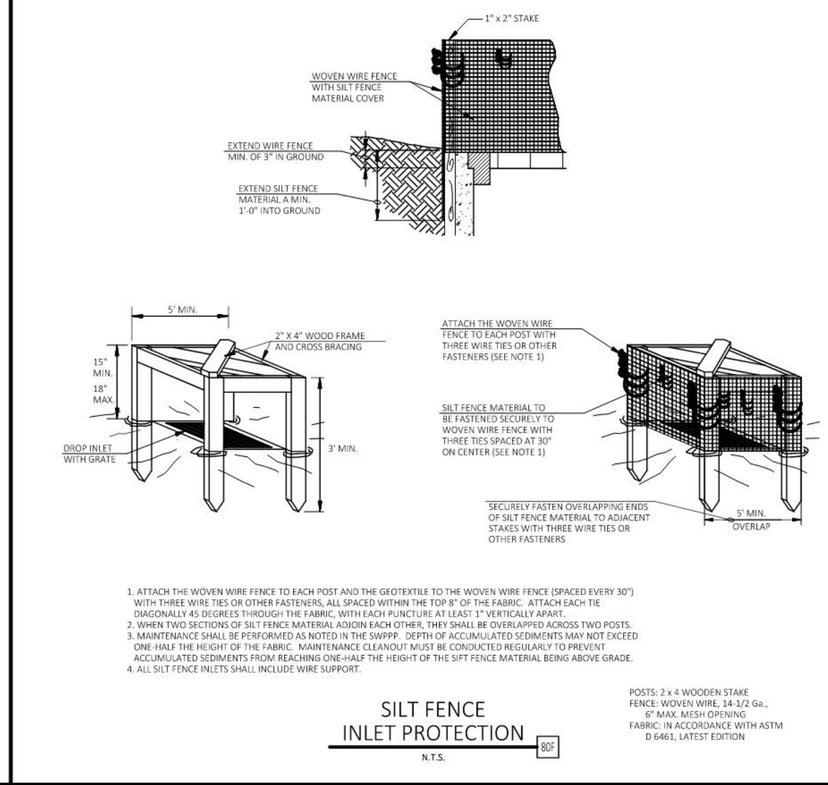
DETAIL SHEET 1

SHEET TITLE

SHEET NUMBER

C8.0

5.2D - PLAN SET

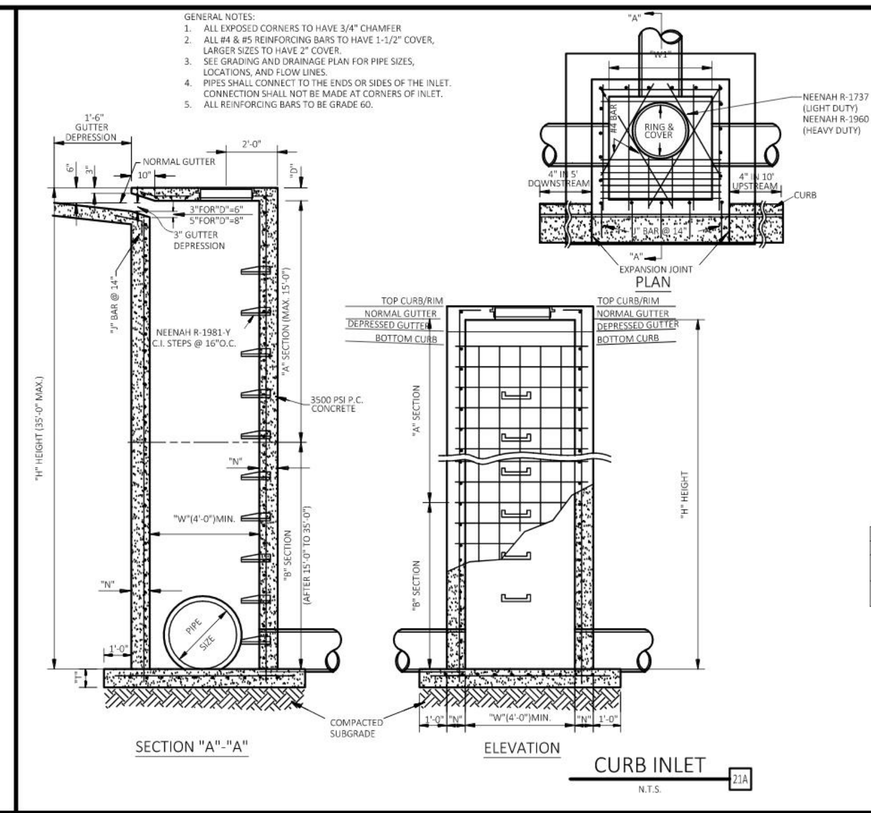


1. ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART.
2. WHEN TWO SECTIONS OF SILT FENCE MATERIAL ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED ACROSS TWO POSTS.
3. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE FABRIC. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF THE SIFT FENCE MATERIAL BOING ABOVE GRADE.
4. ALL SILT FENCE INLETS SHALL INCLUDE WIRE SUPPORT.

POSTS: 2 x 4 WOODEN STAKE
FENCE: WOVEN WIRE, 14-1/2 Ga., 6" MAX. MESH OPENING
FABRIC: IN ACCORDANCE WITH ASTM D 6461, LATEST EDITION

SILT FENCE INLET PROTECTION
N.T.S. 80F

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER
2. ALL #4 & #5 REINFORCING BARS TO HAVE 1-1/2" COVER, LARGER SIZES TO HAVE 2" COVER.
3. SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
4. PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF INLET.
5. ALL REINFORCING BARS TO BE GRADE 60.



REINFORCEMENT SCHEDULE, BASE	
SECTION	
"A"	#4's @ 6" E.W.
"B"	#6's @ 6" E.W.

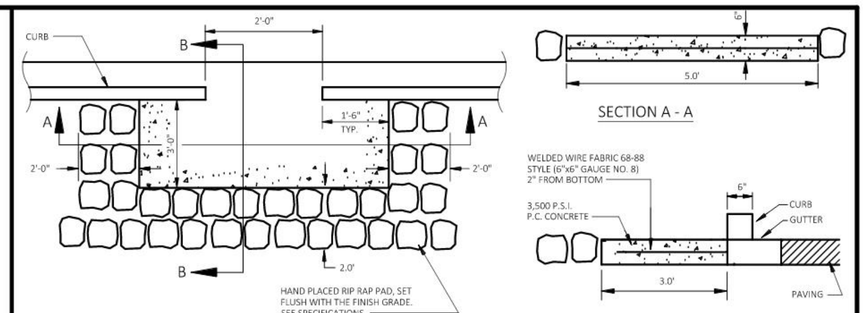
TABLE OF 'W' DIMENSIONS			
PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°
ø 24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
DOUBLE	FOR "A" SECTION ONLY		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-6"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

REINFORCEMENT SCHEDULE, WALLS			
SECTION	WIDTH ("W")	HOR.	VERT.
"A"	4'	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'	#4's @ 6"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

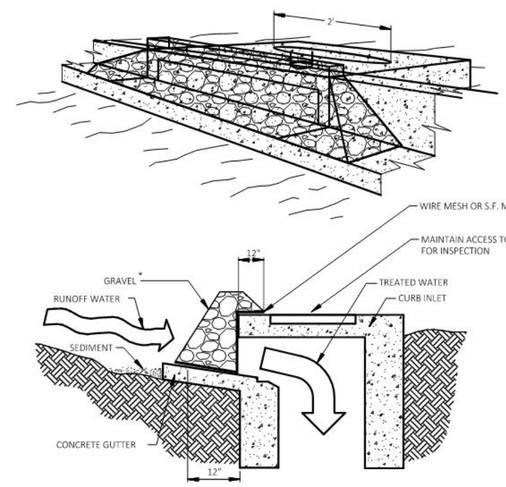
TABLE OF "T" & "N" DIMENSIONS				
SECTION	WIDTH ("W")	"T"	"N"	"D"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
"B"	4'	6" + PIPE THICKNESS	8"	8"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	10"	8"

REINFORCEMENT SCHEDULE, TOP		
DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4'S @ 6" E.W.	DIAGONAL @ COVER
W1 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER

SECTION "A"-"A"
ELEVATION
CURB INLET
N.T.S. 71A



CURB CUT
N.T.S. 37A

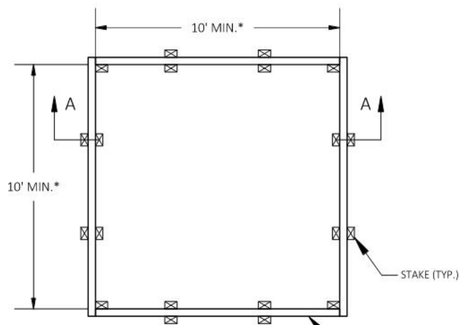


SPECIFIC APPLICATION

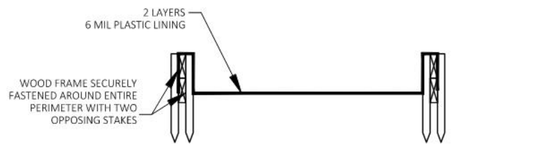
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* GRAVEL SHALL BE 2"-3" CLEAN STONE

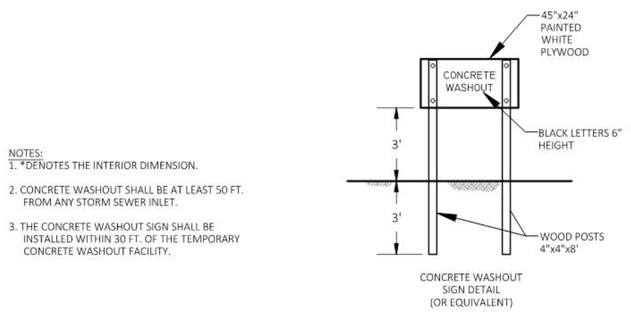
GRAVEL CURB INLET SEDIMENT FILTER
N.T.S. 80E



PLAN
N.T.S.

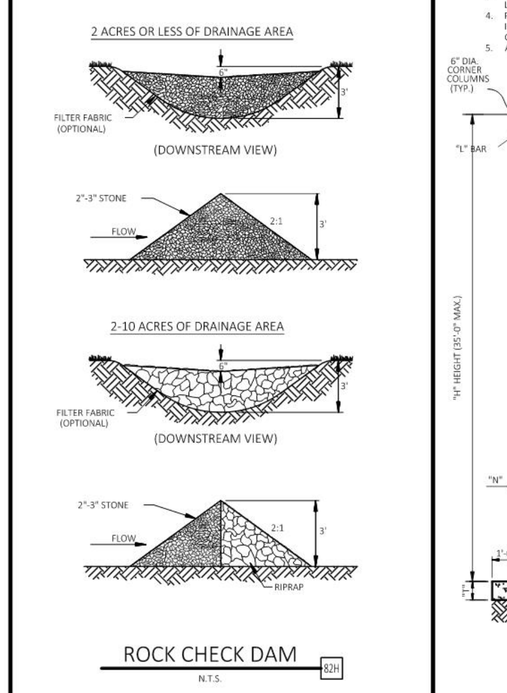


SECTION A-A
N.T.S.



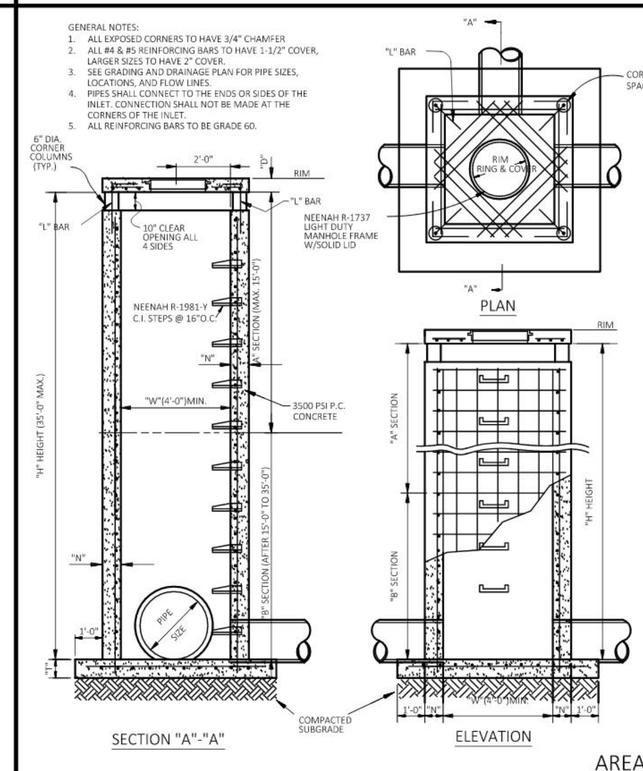
NOTES:
1. * DENOTES THE INTERIOR DIMENSION.
2. CONCRETE WASHOUT SHALL BE AT LEAST 50 FT. FROM ANY STORM SEWER INLET.
3. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

TEMPORARY CONCRETE WASHOUT (ABOVE GRADE)
N.T.S. 80C



ROCK CHECK DAM
N.T.S. 82H

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER
2. ALL #4 & #5 REINFORCING BARS TO HAVE 1-1/2" COVER, LARGER SIZES TO HAVE 2" COVER.
3. SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
4. PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT THE CORNERS OF THE INLET.
5. ALL REINFORCING BARS TO BE GRADE 60.



REINFORCEMENT SCHEDULE, BASE	
SECTION	
"A"	#4's @ 6" E.W.
"B"	#6's @ 6" E.W.

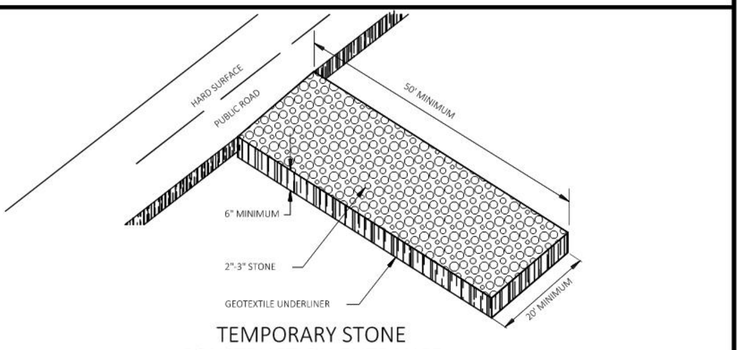
TABLE OF 'W' DIMENSIONS			
PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°
ø 24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
DOUBLE	FOR "A" SECTION ONLY		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-6"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

REINFORCEMENT SCHEDULE, WALLS			
SECTION	WIDTH ("W")	HOR.	VERT.
"A"	4'	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'	#4's @ 6"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

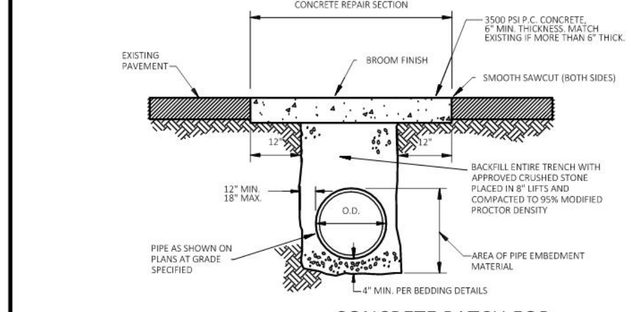
TABLE OF "T" & "N" DIMENSIONS				
SECTION	WIDTH ("W")	"T"	"N"	"D"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
"B"	4'	6" + PIPE THICKNESS	8"	8"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	10"	8"

REINFORCEMENT SCHEDULE, TOP		
DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4'S @ 6" E.W.	DIAGONAL @ COVER
W1 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER

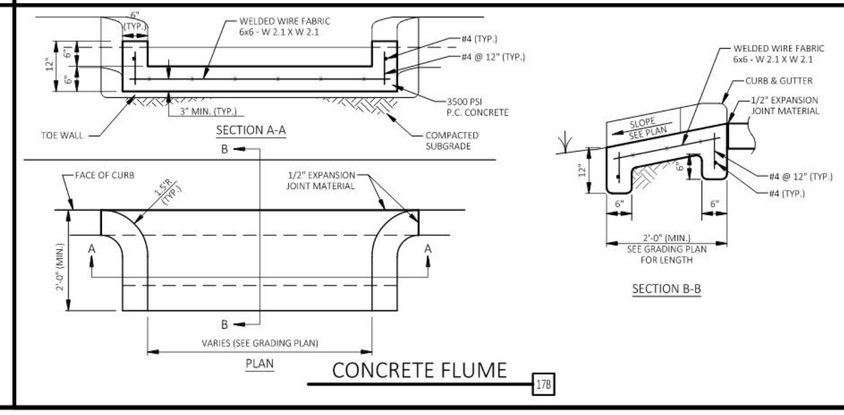
SECTION "A"-"A"
ELEVATION
AREA INLET
N.T.S. 72A



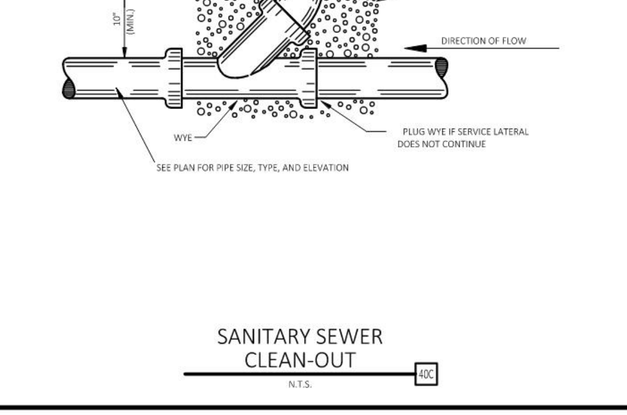
TEMPORARY STONE CONSTRUCTION ENTRANCE
N.T.S. 85A



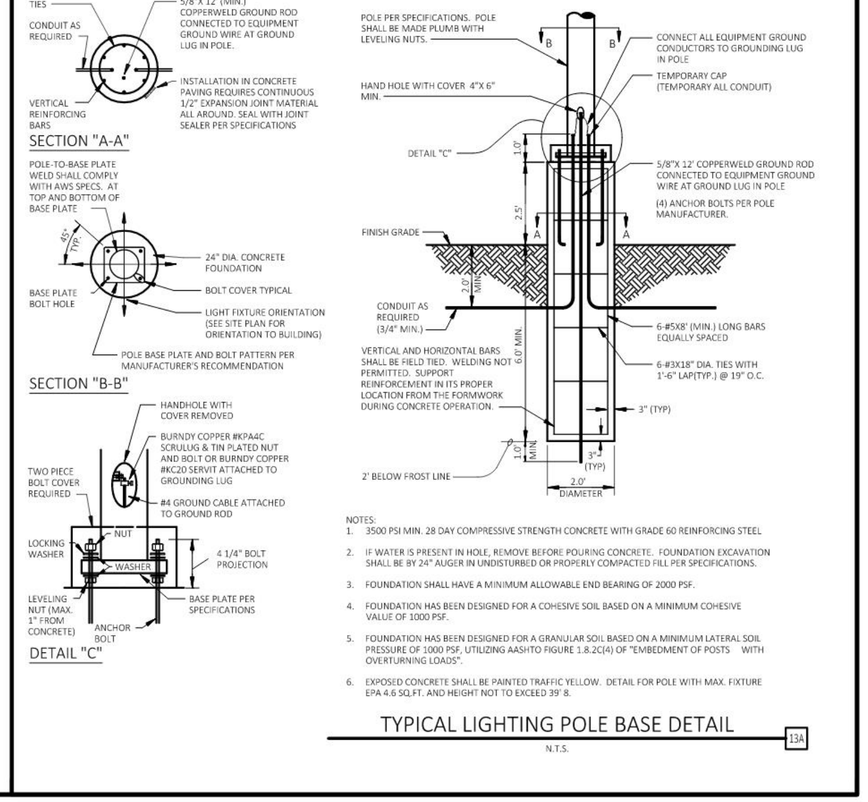
CONCRETE PATCH FOR STREET OR DRIVE
N.T.S. 59B



CONCRETE FLUME
N.T.S. 77B



SANITARY SEWER CLEAN-OUT
N.T.S. 68C



NOTES:
1. 3500 PSI MIN. 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH GRADE 60 REINFORCING STEEL
2. IF WATER IS PRESENT IN HOLE, REMOVE BEFORE POURING CONCRETE. FOUNDATION EXCAVATION SHALL BE BY 24" AUGER IN UNDISTURBED OR PROPERLY COMPACTED FILL PER SPECIFICATIONS.
3. FOUNDATION SHALL HAVE A MINIMUM ALLOWABLE END BEARING OF 2000 PSF.
4. FOUNDATION HAS BEEN DESIGNED FOR A COHESIVE SOIL BASED ON A MINIMUM COHESIVE VALUE OF 1000 PSF.
5. FOUNDATION WAS REEN DESIGNED FOR A GRANULAR SOIL BASED ON A MINIMUM LATERAL SOIL PRESSURE OF 1000 PSF. UTILIZING AASHTO FIGURE 1.8.2(24) OF "EMBEDMENT OF POSTS WITH OVERTURNING LOADS".
6. EXPOSED CONCRETE SHALL BE PAINTED TRAFFIC YELLOW. DETAIL FOR POLE WITH MAX. FIXTURE EPA 4.6 SQ.FT. AND HEIGHT NOT TO EXCEED 39' 8.

TYPICAL LIGHTING POLE BASE DETAIL
N.T.S. 13A

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Andrew E Diehl
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E DIEHL — LICENSED PROFESSIONAL ENGINEER — 59050 — STATE OF MINNESOTA

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DRAWING LOCATION - \\BNV\LPANNAS01.CEIBVL.CEIENG.COM\PROJECTS\33000\33134.01\DRAWINGS\DESIGN\WORKING\33134-CS.DWG – SAVED BY - AMCDANIEL

CEI Solutions for Land and Life

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH
Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

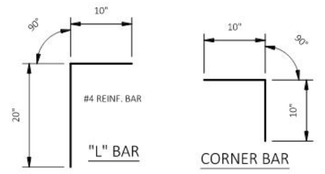
F-7524

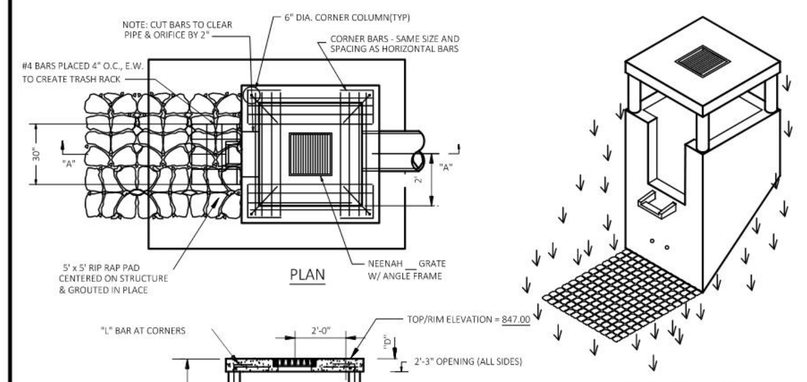
PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

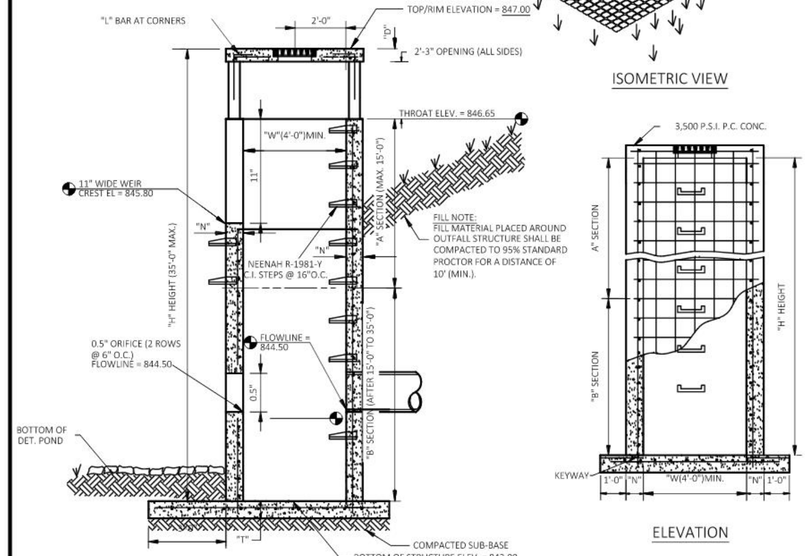
DETAIL SHEET 2
SHEET TITLE
SHEET NUMBER
C8.1

5.2D - PLAN SET

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER
2. ALL #4 & #5 REINFORCING BARS TO HAVE 1-1/2" COVER, LARGER SIZES TO HAVE 2" COVER.
3. SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
4. PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF INLET.
5. ALL REINFORCING BARS TO BE GRADE 60.







REINFORCEMENT SCHEDULE, BASE		
SECTION		
"A"	#4's @ 6" E.W.	
"B"	#6's @ 6" E.W.	

TABLE OF 'W' DIMENSIONS

PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°
≤ 24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
DOUBLE	FOR "A" SECTION ONLY		
24"	7'-0"	7'-10"	9'-5"
30"	8'-3"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-6"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

REINFORCEMENT SCHEDULE, WALLS			
SECTION	WIDTH ("W")	HOR.	VERT.
"A"	4'	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

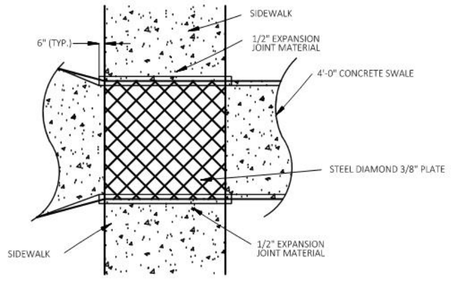
TABLE OF "T" & "N" DIMENSIONS

SECTION	WIDTH ("W")	"T"	"N"	"O"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
"B"	4'	6" + PIPE THICKNESS	8"	6"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	10"	8"

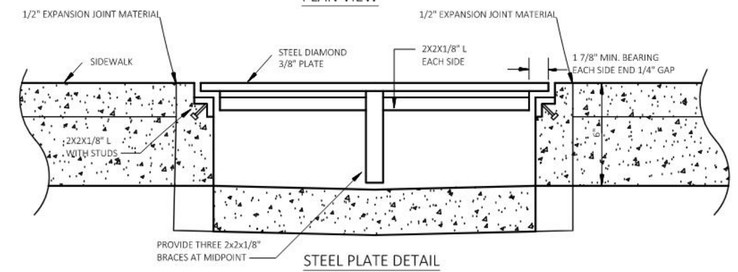
REINFORCEMENT SCHEDULE, TOP

DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4'S @ 6" E.W.	DIAGONAL @ COVER
W1 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER

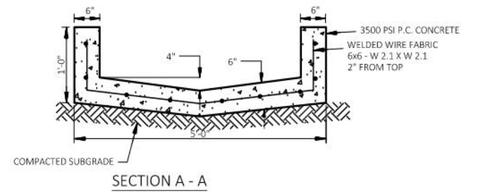
DETENTION BASIN OUTFALL STRUCTURE
N.T.S. 06



PLAN VIEW

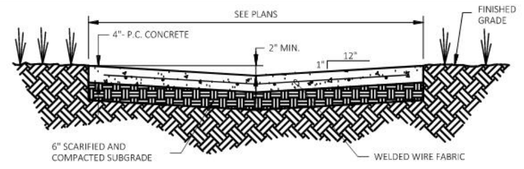


STEEL PLATE DETAIL



SECTION A - A

SIDEWALK/CONCRETE SWALE W/ STEEL PLATE
N.T.S. 79



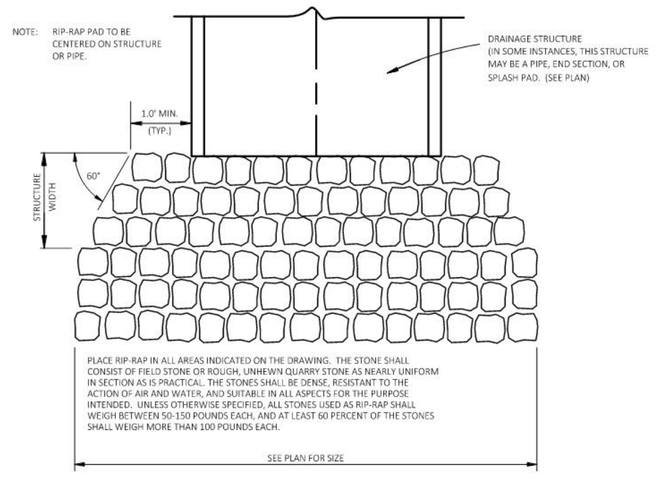
SUBGRADE NOTES

1. COMPACT TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR) AT ± 2% OF PROCTOR OPTIMUM MOISTURE CONTENT.

CONCRETE NOTES

1. COMPRESSIVE STRENGTH: 3,500 P.S.I. MINIMUM AT 28 DAYS.
2. FLOAT OR SMOOTH FINISH.
3. REINFORCEMENT: WELDED WIRE FABRIC - 6"X6" - W 2.1 X W 2.1, 2" FROM BOTTOM.
4. WEAKENED-PLANE CONTROL JOINTS 15' O.C. AND FILLED/SEALED. SEE SPECIFICATIONS FOR APPROVED FILLER/SEALERS.

CONCRETE SWALE
N.T.S. 185



RIP-RAP PAD
N.T.S. 170

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Andrew Diehl
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E. DIEHL
LICENSED PROFESSIONAL ENGINEER
59050
STATE OF MINNESOTA

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEAN FREAK CARWASH POWERED BY CIRCLE K
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

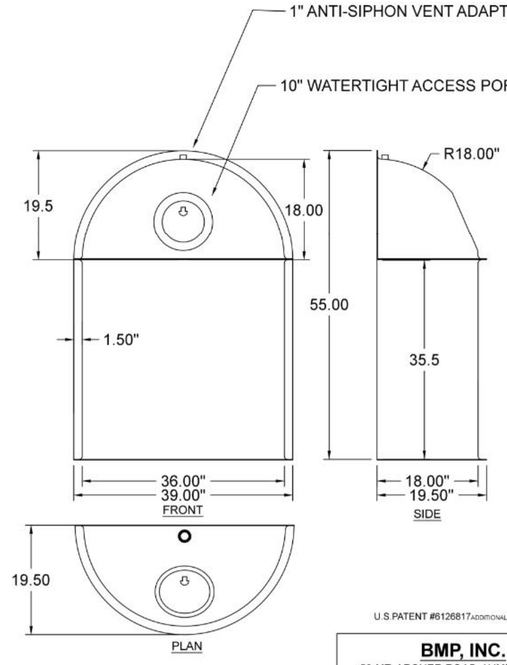
F-7524

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

DETAIL SHEET 3
SHEET TITLE
SHEET NUMBER
C8.2

DRAWING LOCATION - \\BNVLPANNAS01.CEIBVL.CEIENG.COM\PROJECTS\33000\33134.01\DRAWINGS\DESIGN\WORKING\33134-CS.DWG – SAVED BY - AMCDANIEL
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5.2D - PLAN SET



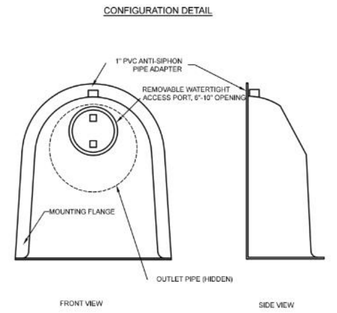
U.S.PATENT #5126817ADDITIONAL PATENTS PENDING

BMP, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 504-8008 FAX: (860)434-3195

DESCRIPTION	DATE	SCALE
36FTB SNOUT OIL & DEBRIS STOP	03/28/05	NONE

DRAWING NUMBER 36FTB

CONFIGURATION DETAIL



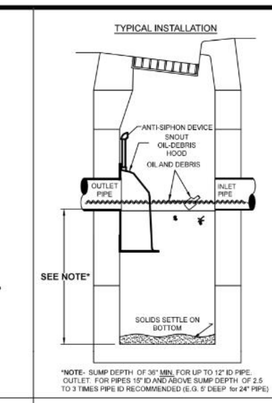
SNOUT OIL-WATER-DEBRIS SEPARATOR

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
BEST MANAGEMENT PRODUCTS, INC.
9 MATHEWS DRIVE, UNIT A-1,A2
EAST HADDAM, CT. 06423
TOLL FREE: (800) 504-8008 OR (888) 434-0277, FAX: (877) 434-3197
WEB SITE: www.bmpinc.com
OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3' AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. ALL STRUCTURE JOINTS SHALL BE WATERTIGHT.
9. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 2" STAINLESS STEEL BOLTS AND OIL RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
INSTALLATION KIT SHALL INCLUDE:
A. INSTALLATION INSTRUCTIONS
B. PRE-FABRICATED ANTI-SIPHON VENT AND ADAPTER
C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
D. 3/8" STAINLESS STEEL BOLTS
E. ANCHOR SHIELDS

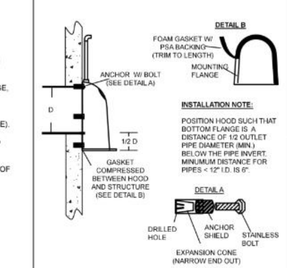
US Patent # 6126817, 7951294, 7857966, 8512555
Canada Patent # 2285146, 2690156, 2690158 others pending

TYPICAL INSTALLATION



*NOTE: SUMP DEPTH OF 30" MIN. FOR UP TO 12" ID PIPE. OUTLET PIPE 12" ID AND ABOVE SUMP DEPTH OF 2.5 TO 3 TIMES PIPE ID RECOMMENDED (E.G. 5' DEEP for 24" PIPE)

INSTALLATION DETAIL



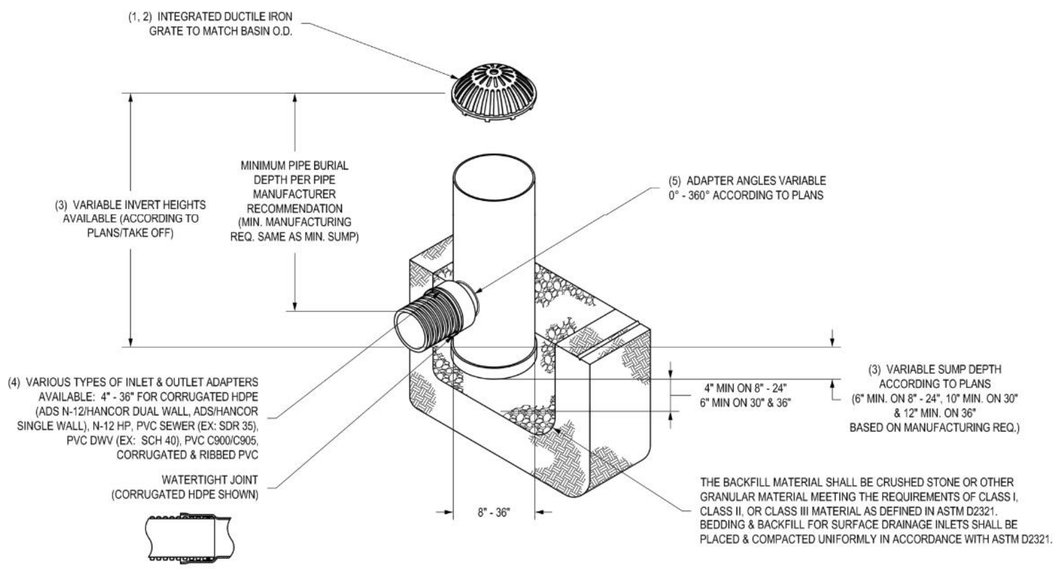
INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A MINIMUM OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/18	NONE

DRAWING NUMBER SP-SN

NYLOPLAST DRAIN BASIN WITH DOME GRATE



1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 5" & 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-055.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 30").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 8" - 30" DOME GRATES HAVE NO LOAD RATING.

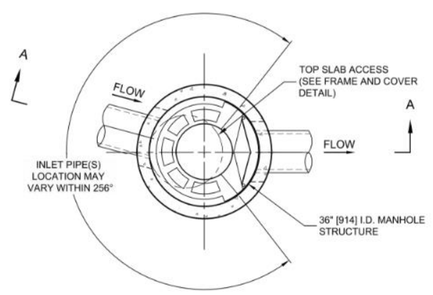
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DRAWN BY	EBC	MATERIAL	
DATE	03-25-10		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	06-12-18		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

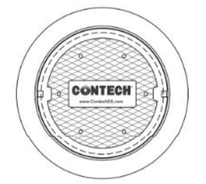
ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
DRAIN BASIN WITH DOME GRATE
QUICK SPEC INSTALLATION DETAIL

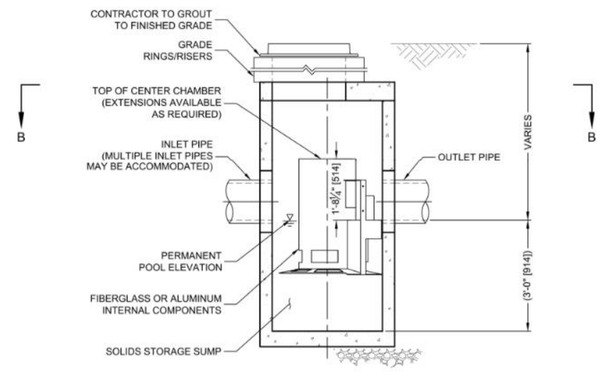
DWG NO. 7001-110-397 REV E



PLAN VIEW B-B
NOT TO SCALE



FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE



ELEVATION A-A
NOT TO SCALE

CASCADE separator™

CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-3 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [L/s])			5.64 CFS
PEAK FLOW RATE (cfs [L/s])			5.64 CFS
RETURN PERIOD OF PEAK FLOW (yrs)			100-year
RIM ELEVATION			849.10
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1	844.46	HDPE	12"
INLET PIPE 2			
OUTLET PIPE	844.36	HDPE	12"

NOTES / SPECIAL REQUIREMENTS:

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CS-3
CASCADE SEPARATOR
STANDARD DETAIL

Professional Engineer Certification

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:
Printed Name: **Andrew E Diehl**
Date: **01/05/2024**
License Number: **59050**

ANDREW E. DIEHL LICENSED PROFESSIONAL ENGINEER 59050 STATE OF MINNESOTA

CEI Solutions for Land and Life

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEAN FREAK CAR WASH
Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

F-7524

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	ASM
CEI PROJECT NUMBER	33134
DATE	1/5/2024
REVISION	REV-0

DETAIL SHEET 4
SHEET TITLE

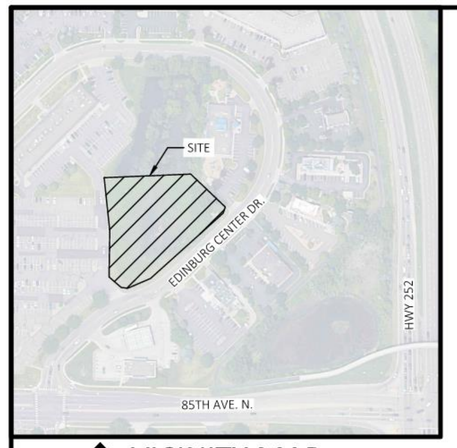
SHEET NUMBER
C8.3

DRAWING LOCATION - P:\33000\33134.00\DRAWINGS\DESIGN\WORKING\33134-CS.DWG -- SAVED BY - AMCDANIEL

I:\COMMON\CAD\TREATMENT\31 CASCADE\40 STANDARD DRAWINGS\SWG\CS-3.DTL.DWG 6/18/2008 4:23 PM

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5.2D - PLAN SET



VICINITY MAP
NOT TO SCALE

ENGINEER
CEI ENGINEERING ASSOCIATES, INC
TRAVIS ALLEY
PROJECT MANAGER
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
TALLEY@CEIENG.COM
PHONE: (479) 273-9472

OWNER
ODYSSEY SERVICES GROUP, LLC
CHRIS JOHNSON
NORTHWEST ARKANSAS
CHRIS.JOHNSON@ODYSSEYSERVICESGROUP.COM
PHONE: (479) 402-4652

ARCHITECT
HARRISON FRENCH & ASSOCIATES
MEGHAN DAVIS
1705 S. WALTON BLVD., STE 3
BENTONVILLE, AR 72712
MEGHAN.DAVIS@HFA-AE.COM.COM
PHONE: (479) 273-7780 EXT.269

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

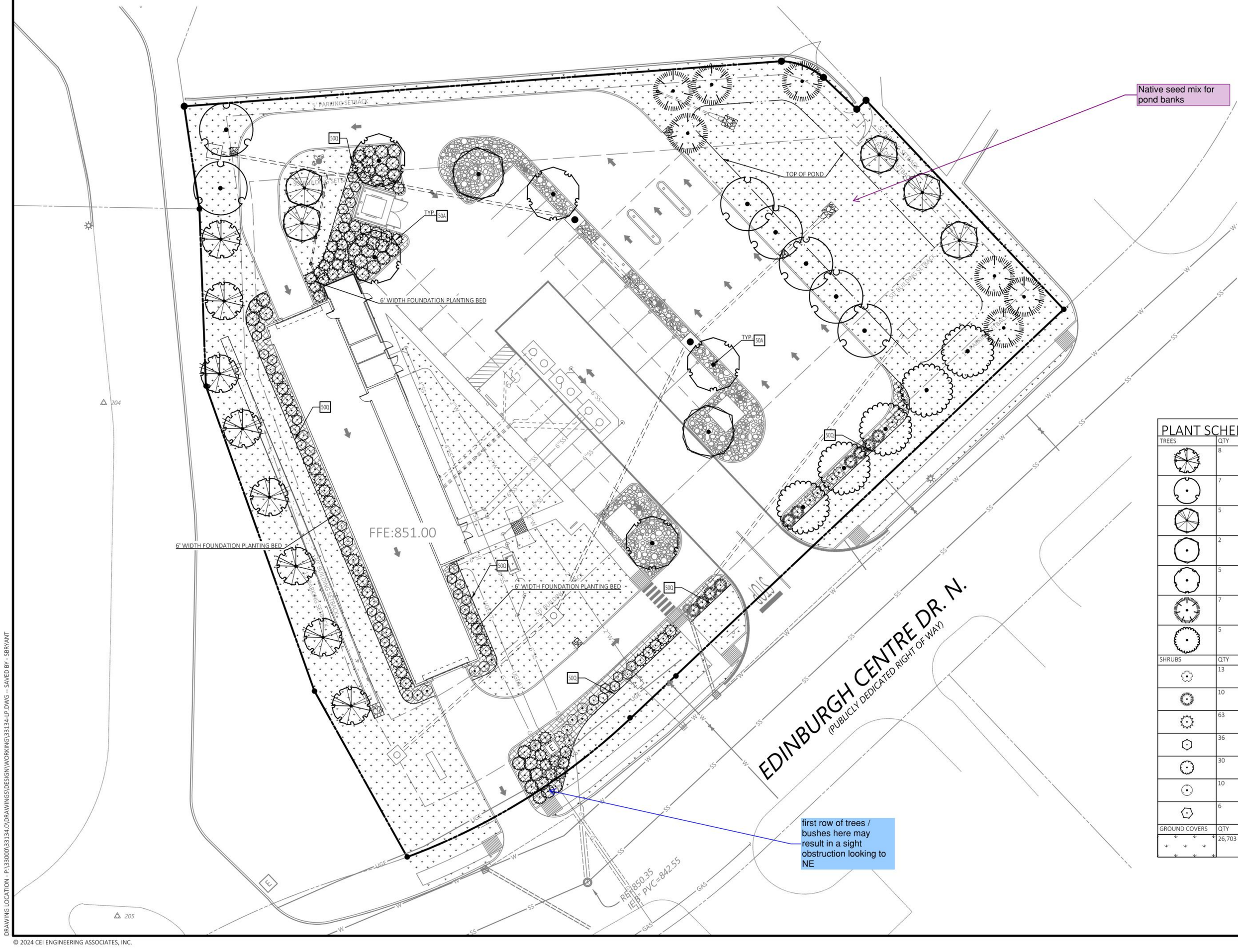
SITE BENCHMARK
SITE BENCHMARK #1: BM-251, ELEV.=854.91', HYDRANT SOUTHWEST OF SITE

LANDSCAPE REQUIREMENTS

AREA	REQUIREMENT	REQUIRED	PROVIDED
CANOPY COVER	ONE CANOPY TREE SHALL BE REQUIRED FOR EACH 360 SF OF REQUIRED PARKING LOT GREENSPACE	2,321 SF OF GREENSPACE / 360 = 7 TREES REQUIRED	7 PROVIDED
	10% OF THE PARKING AREA SHALL BE GREENSPACE	23,215 SF OF PARKING AREA x 10% = 2,321 SF OF GREENSPACE REQUIRED	4,265 SF PROVIDED
FOUNDATION LANDSCAPE	AT LEAST 50% OF THE TOTAL BUILDING PERIMETER SHALL BE LANDSCAPED IN AN AREA NO LESS THAN 6' IN WIDTH	TOTAL BUILDING PERIMETER = 382 LF x 50% = 191 LF REQUIRED	242 LF PROVIDED
OPEN AREA LANDSCAPE	30% OF THE SITE MUST BE OPEN SPACE	61,500 SF OF SITE AREA x 30% = 18,450 SF REQUIRED	30,552 SF (50%) PROVIDED
	ONE OVERSTORY TREE PER 3000 SF OF OPEN AREA	18,450 / 3,000 = 7 TREES REQUIRED	7 PROVIDED
	ONE ORNAMENTAL TREE PER 1500 SF OF OPEN AREA	18,450 / 1500 = 13 TREES REQUIRED	13 PROVIDED
	ONE EVERGREEN TREE PER 3000 SF OF OPEN AREA	18,450 / 3000 = 7 TREES REQUIRED	7 PROVIDED
	ONE SHRUB PER 100 SF OF OPEN AREA	18,450 / 100 185 SHRUBS REQUIRED	PROVIDED
STREET TREES	ONE TREE PER 70 LF OF STREET FRONTAGE	EDINBURGH CENTRE DR: 322 LF / 70 = 5 TREES REQUIRED	5 PROVIDED

Know what's below. Call before you dig.

0 20' 30' 40'
SCALE IN FEET



LEGEND

EXISTING LEGEND

e	EAST OR ELECTRIC	OHT	OVERHEAD TELEPHONE
n	NORTH	OHTV	OVERHEAD TV
oh	OVERHEAD	X"SS	SANITARY SEWER
s	SOUTH OR SEWER	UGE	UNDERGROUND ELECTRIC
t	TELEPHONE	UGE&T	UNDERGROUND ELECTRIC AND TELEPHONE
ug	UNDERGROUND	UGT	UNDERGROUND TELEPHONE
w	WEST OR WATER	UGTV	UNDERGROUND TV
	PROPERTY LINE	X"W	WATER
	RIGHT OF WAY LINE	.5-10-11 50.5	TREE INFO .5 = DIAMETER OF TRUNK IN FEET 10 = HEIGHT OF TREE IN FEET 11 = CANOPY DIAMETER IN FEET 50.5 = ELEVATION AT BASE OF TREE
	STORM DRAIN		
X"G	GAS		
OHE	OVERHEAD ELECTRIC		
OHE&T	OVERHEAD ELECTRIC AND TELEPHONE		

PROPOSED LEGEND

- BOUNDARY LINE
- RIGHT OF WAY LINE
- STORM DRAIN
- TYPICAL PLANTING WITH QUANTITY AND KEY (SEE PLANT LIST)

LANDSCAPE DETAILS

50A TREE PLANTING
50B SHRUB PLANTING
50Q STEEL EDGING

2024-01-04 14:15

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	SIZE	DETAIL	INSTALL HT.	CAL.
	8	ACER GINNALA / AMUR MAPLE	B&B	50A		2.00" CAL.
	7	ACER X FREEMANII AUTUMN BLAZE / AUTUMN BLAZE MAPLE	B&B	50A		2.00" CAL.
	5	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY	B&B	50A		2.00" CAL.
	2	BETULA NIGRA 'BNMTF' / DURA HEAT® RIVER BIRCH	B&B	50A		2.00" CAL.
	5	GLEDITSIA TRIACANTHOS INERMIS 'IMPCOLE' / IMPERIAL® HONEY LOCUST	B&B	50A		2.00" CAL.
	7	PICEA PUNGENS / COLORADO SPRUCE	B&B	50A	8` MIN. HT.	
	5	TILIA CORDATA 'GREENSPIRE' / GREENSPIRE LITTLELEAF LINDEN	B&B	50A		2.00" CAL.
SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	DETAIL	INSTALL HT.	
	13	CORNUS SERICEA / RED TWIG DOGWOOD	5 GAL	50B		
	10	JUNIPERUS SQUAMATA EXPANSA 'PARSONII' / EXPANSA PARSONII JUNIPER	5 GAL	50B		
	63	JUNIPERUS VIRGINIANA 'GREY OWL' / GREY OWL EASTERN REDCEDAR	5 GAL	50B		
	36	PHYSOCARPUS OPULIFOLIUS 'SNOWFALL' / SNOWFALL NINEBARK	5 GAL	50B		
	30	RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC	5 GAL	50B		
	10	RIBES AUREUM / GOLDEN CURRANT	5 GAL	50B		
	6	VIBURNUM DENTATUM `BLUE MUFFIN` / BLUE MUFFIN ARROWWOOD VIBURNUM	5 GAL	50B		
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE			
	26,703 SF	FESTUCA ARUNDINACEA 'KENTUCKY 31' / KENTUCKY TALL FESCUE	SOD			

2023-12-13 12:52

MULCH AND LANDSCAPE ROCK SCHEDULE

SYMBOL	DESCRIPTION	QTY	DETAIL
	PINE BARK MULCH. DEPTH 4"	3,609 SF	
	1"-2" DIA. COLORADO RIVER ROCK. DEPTH 4" COLOR: BROWN/TAN	1,897 SF	

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEAN FREAK CARWASH POWERED BY CIRCLE K

EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

Landscape Architect
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: Ryan Y. Evitts
Date:01/04/2024 License Number: 61267

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	MMP
CEI PROJECT NUMBER	33134
DATE	1/4/2024
REVISION	REV-0

LANDSCAPE PLAN
SHEET TITLE

SHEET NUMBER
L1

DRAWING LOCATION - P:\33000\33134.01\DRAWINGS\DESIGN\WORKING\33134-LP.DWG -- SAVED BY - SBRYANT

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5.2D - PLAN SET

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL PROPOSED LANDSCAPING IS INSTALLED IN ACCORDANCE WITH PLANS, DETAILS, SPECIFICATIONS (IF APPLICABLE) AND ALL LOCAL CODES AND REQUIREMENTS.
2. CONTRACTOR TO INSPECT SITE AND VERIFY CONDITIONS AND DIMENSIONING PRIOR TO PROCEEDING WITH WORK DESCRIBED HERE IN. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING ANY CONSTRUCTION.
3. QUANTITIES PROVIDED IN THE PLANT LIST ARE FOR GENERAL USE ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL PLANT AND LANDSCAPE MATERIAL QUANTITIES. SYMBOL COUNT ON PLAN TAKES PRECEDENCE OVER TABLE QUANTITIES.
4. IMMEDIATELY AFTER AWARD OF CONTRACT, NOTIFY THE OWNER'S REPRESENTATIVE AND/OR THE LANDSCAPE ARCHITECT OF UNAVAILABILITY OF SPECIFIED PLANT MATERIAL FROM COMMERCIAL NURSERIES. THE OWNER'S REPRESENTATIVE AND/OR LANDSCAPE ARCHITECT WILL PROVIDE ALTERNATE PLANT MATERIAL SELECTIONS IF UNAVAILABILITY OCCURS. SUCH CHANGES SHALL NOT ALTER THE ORIGINAL BID PRICE UNLESS A CREDIT IS DUE TO THE OWNER.
5. ALL PLANT MATERIALS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1.
6. CONTAINER GROWN STOCK SHOULD HAVE GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL TOGETHER.
7. ANY PLANT SUBSTITUTIONS, RELOCATION, OR REQUIRED CHANGE SHALL REQUIRE THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNER.
8. THE OWNER'S REPRESENTATIVE AND/OR LANDSCAPE ARCHITECT RESERVE THE RIGHT TO REFUSE ANY MATERIAL THEY DEEM UNACCEPTABLE.
9. COORDINATE WITH PROJECT REPRESENTATIVE FOR DISTURBED SITE TREATMENTS OUTSIDE LANDSCAPE IMPROVEMENTS. SEE CIVIL PLANS FOR SOIL STABILIZATION FOR EROSION CONTROL.
10. IF REQUIRED, CONTRACTOR TO ENSURE THAT AN AUTOMATED IRRIGATION SYSTEM THAT PROVIDES COMPLETE COVERAGE OF THE SITE IS INSTALLED PRIOR TO INSTALLING TREES/PALMS (SEE IRRIGATION PLAN SHEET IF PROVIDED). IF NO PLAN IS PROVIDED THE CONTRACTOR SHALL SUBMIT A PROPOSED DESIGN TO THE LANDSCAPE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. THE PROPOSED DESIGN MUST HAVE AN APPROVED BACKFLOW DEVICE AND RAIN SENSOR INSTALLED TO STOP IRRIGATION DURING RAIN EVENTS. CONTRACTOR SHALL ENSURE THAT THERE IS POSITIVE DRAINAGE AND NO PONDING OF WATER AT ROOT AREA.
11. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEEDED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
12. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA 2) TO PROTECT OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION AT NO COST TO THE OWNER.
13. WEED MAT IS REQUIRED IN LANDSCAPED ISLANDS AS SPECIFIED.
14. ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN.
15. IF A SWPPP PLAN IS PROVIDED THIS PLAN IS TO BE IMPLEMENTED COOPERATIVELY WITH SWPPP PLAN, AS NEEDED, TO MAXIMIZE THE EFFECTIVENESS OF THE SWPPP PLAN FOR THIS SITE.
16. THE CONTRACTOR IS ENCOURAGED TO COMPLETE TEMPORARY OR PERMANENT SEEDING OR SODDING IN STAGES FOR SOIL STABILIZATION AS AREAS ARE COMPLETED AFTER GRADING.
17. ALL DISTURBED AREAS AS DESIGNATED ON THE GRADING PLAN SHALL BE SOWN WITH GRASS SEED MIX OF LOCAL FESCUE TYPE BY WEIGHT @ 5LBS / 1000 SF.
18. SEEDING ON SLOPES: HYDROSEED WITH GRASS SEED AS INDICATED ON PLANS. SEE LEGEND FOR SPECIFIC GRASS SEED TYPE. SEEDING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER BED PREPARATION. HYDROSEED MIXTURE SHALL CONTAIN CELLULOSE MULCH APPLIED AT A RATE OF 2,000 LBS./ACRE, WITH A MAXIMUM OF 50 LBS./100 GAL. OF WATER. IF SEEDING IS DELAYED AFTER MIXING 1/2 - 2 HOURS ADD AN ADDITIONAL 50% OF SEED MIX. IF DELAY IS LONGER THAN 2 HOURS, BEGIN WITH NEW MIXTURE. ALL SLOPES 2:1 OR GREATER SHALL BE COVERED WITH EROSION CONTROL BLANKET AS SHOWN IN THE EROSION CONTROL BLANKET DETAIL. SEE SPECIFICATIONS FOR SEED ESTABLISHMENT REQUIREMENTS.
19. ALL PLANT MATERIAL IN TREE HOLDING AREAS SHALL BE MANUALLY WATERED/IRRIGATED TO KEEP MOIST UNTIL PLANTED.

PLANTING NOTES

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING ALL PLANTED AREAS. ALL DELETERIOUS MATERIALS SUCH AS ROCK, TRASH, CONSTRUCTION DEBRIS, AGGREGATE BASE MATERIAL, ASPHALT, ETC. SHALL BE REMOVED PRIOR TO ANY FILL OPERATIONS. FILL ALL PLANTING AREAS WITH CLEAN EARTHEN FILL. SOIL SHALL BE FREE OF HEAVY, STIFF CLAY AND ANY DELETERIOUS MATERIAL OVER ONE INCH IN SIZE. THE TOP SIX INCHES OF FILL MATERIAL STRIPPED FROM SITE MAY BE UTILIZED FOR PLANTER OR TOPSOIL FILL IF PRIOR APPROVAL HAS BEEN OBTAINED FROM THE OWNER'S REPRESENTATIVE AND/OR LANDSCAPE ARCHITECT.
2. LOCATE SHRUBS A DISTANCE OF HALF OF THEIR AVERAGE MATURE SPREAD AWAY FROM WALKS, STRUCTURES, CONCRETE PADS, ETC. LOCATE GROUND COVER PLANTINGS A MINIMUM OF 2' FROM WALKS, STRUCTURES, CONCRETE PADS, ETC.
3. ALL LAWN AREAS NOT OTHERWISE BORDERED BY WALKS, OR OTHER STRUCTURES, SHALL HAVE MANUFACTURED EDGING AS REQUIRED.
4. TREES PLANTED ADJACENT TO PUBLIC ROADS AND PEDESTRIAN SIDEWALKS SHALL BE PRUNED SUFFICIENTLY TO AVOID VISUAL BLOCKS TO INTERSECTING VEHICULAR ACCESS OR INTERFERENCE WITH PEDESTRIAN WALKWAYS. TREES WITH A 4" OR LARGER CALIPER SHALL BE PRUNED UP TO 6'-0" ABOVE PAVEMENTS.
5. ALL TREES WITHIN 4' OF PAVED SURFACES (SUCH AS CURBS, WALLS, BUILDINGS AND SIDEWALKS) SHALL BE PROVIDED WITH A DEEP ROOT BARRIER CONTROL DEVICE OR EQUAL. INSTALL PER MFR'S SPECIFICATIONS.
6. TOPSOIL DEPTH SHALL BE AS FOLLOWS :
   PLANTER BEDS - 12" MINIMUM
   GRASS/SOD AREAS - 4" MINIMUM (AFTER COMPACTION)
7. BACKFILL ALL TREES, SHRUBS, GROUNDCOVER WITH A MIXTURE OF 2 PARTS NATIVE SOIL AND 1 PART SOIL CONDITIONING WITH WOOD MULCH.
8. THE LANDSCAPE CONTRACTOR SHALL WATER TEST ALL PLANTING HOLE PRIOR TO PLANTING. IF HOLES DO NOT DRAIN PROPERLY, EXCAVATE FURTHER UNTIL IMPERMEABLE LAYER IS BREACHED. EXCAVATED PLANT PITS SHALL HAVE POSITIVE DRAINAGE. PLANT PITS (WHEN FULLY FLOODED WITH WATER) SHALL DRAIN WITHIN 1 HOUR OF FILLING. ENSURE THAT ALL PLANT PITS HAVE POSITIVE DRAINAGE.
9. ALL PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE. PRE-EMERGENT HERBICIDE SHALL BE APPLIED PER MANUFACTURE'S RECOMMENDATIONS AND SHALL OCCUR AFTER TOPSOIL PLACEMENT AND PRIOR TO INSTALLATION OF PLANT MATERIALS AND MULCH.
10. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH A TIME RELEASE FERTILIZER PER BRAND'S SPECIFIED APPLICATION RATES.
11. ALL PLANTING BED SOILS SHALL BE AMENDED WITH 2" OF ORGANIC COMPOST
12. ALL TREES AND SHRUBS SHALL BE PLANTED IN SUCH A MANNER AS TO ENSURE THEIR SURVIVAL.
13. ANY ROPE OR WIRE BINDING THE BALL SHALL BE CUT PRIOR TO PREVENT GIRDLING OF THE TREE. REMOVE WIRE, TWINE, AND BURLAP FROM THE TOP HALF OF ALL B&B PLANT MATERIAL.
14. IF A NON-BIODEGRADABLE MATERIAL IS USED AROUND THE BALL, IT SHALL BE COMPLETELY REMOVED PRIOR TO BACKFILLING.
15. PRIOR TO INSTALLATION, THE ROOTS OF CONTAINER GROWN STOCK SHALL BE SEPARATED OR SPLIT TO ENSURE PROPER ROOT DEVELOPMENT.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
17. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS. TREES & SHRUBS SHALL BE PLANTED AS SOON AS POSSIBLE AFTER DELIVERY.
18. ALL TREES MUST BE STRAIGHT-TRUNKED, FULL-HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
19. ALL TREES MUST BE STAKED AS SHOWN IN THE DETAILS.
20. NO SUBSTITUTIONS OR ALTERNATIVES WILL BE ALLOWED FOR GROUND SURFACE MATERIALS UNLESS APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT OR OWNER.
21. MAINTAIN 5' MIN. HORIZONTAL SEPARATION BETWEEN TREE PLANTINGS AND ALL UTILITIES UNLESS OTHERWISE SPECIFIED.
22. A FOUR INCH (4") TOP DRESSING/MULCHING OF MULCH (TYPE PER PLANS) SHALL BE PLACED IN ALL PLANT BEDS AND AROUND ALL TREES. SINGLE TREES OR SHRUBS SHALL HAVE TOP DRESSING TO THE OUTSIDE EDGE OF THE MANUFACTURED EDGING OR LANDSCAPE ISLAND. (SEE PLANTING DETAILS)
23. THE FOLLOWING PLANTING SEASONS ARE RECOMMENDED:
    EVERGREEN SHRUBBERY NOVEMBER - MARCH
    DECIDUOUS SHRUBBERY & TREES NOVEMBER - MARCH
    EVERGREEN TREES NOVEMBER - MARCH

SOLID SOD NOTES

1. ADJUST FINE GRADE TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
2. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1 1/2" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
3. CONTRACTOR TO COORDINATE WITH ON-SITE CONSTRUCTION MANAGER FOR AVAILABILITY OF EXISTING TOPSOIL.
4. IMPORTED TOPSOIL SHALL BE NATURAL, FRIABLE SOIL FROM THE REGION KNOWN AS BOTTOM LAND SOIL; FREE FROM LUMPS, CLAY TOXIC SUBSTANCES, ROOTS, DEBRIS, VEGETATION, STONES; CONTAINING NO SALT AND BE BLACK TO BROWN IN COLOR.
5. ALL LAWN AREAS TO BE FINE GRADED, SETTLED, AND FINISH GRADE APPROVED BY THE OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT PRIOR TO SOD INSTALLATION.
6. ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, CONSTRUCTION WASTE, ETC. SHALL BE REMOVED PRIOR TO PLACING TOPSOIL AND ANY LAWN INSTALLATION.
7. PLANT SOD BY HAND TO COVER INDICATED AREA COMPLETELY. INSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
8. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
9. FERTILIZE ALL SOD AT THE TIME OF PLANTING WITH A TIME RELEASE FERTILIZER PER BRAND'S SPECIFIED APPLICATION RATES.
10. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
11. IF SOD IS INSTALLED ON SLOPES OF 3:1 OR GREATER. SOD SHALL BE STAKED TO AVOID SLIPPING OR SLIDING APART. STAKING OR STAPLES SHALL BE INSTALLED FLUSH AS TO NOT CREATE A MAINTENANCE ISSUE WITH CARE EQUIPMENT.
12. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN VIGOROUS, HEALTHY CONDITIONS.
13. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF AN ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

PLANT GUARANTEE, REPLACEMENT AND MAINTENANCE

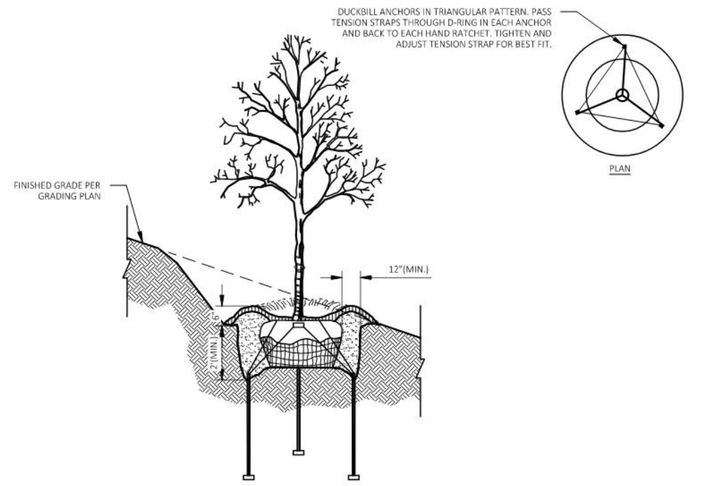
A. GUARANTEE:
ACCEPTANCE OF GRADING AND SEEDING SHALL BE BY LANDSCAPE ARCHITECT AND/OR OWNER. THE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, RESEEDING AND OTHER OPERATIONS NECESSARY TO KEEP ALL LAWN AREAS IN A THRIVING CONDITION. UPON FINAL ACCEPTANCE, OWNER SHALL ASSUME ALL MAINTENANCE RESPONSIBILITIES. AFTER LAWN AREAS HAVE GERMINATED, AREAS WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON WHATSOEVER SHALL BE RE-SEEDED REPEATEDLY UNTIL ALL AREAS ARE COVERED WITH A SATISFACTORY STAND OF GRASS. MINIMUM ACCEPTANCE OF SEEDED LAWN AREAS MAY INCLUDE SCATTERED BARE SPOTS, NONE OF WHICH ARE LARGER THAN 1 SQUARE FOOT, AND WHEN COMBINED DO NOT EXCEED 2% OF TOTAL SEEDED LAWN AREA.

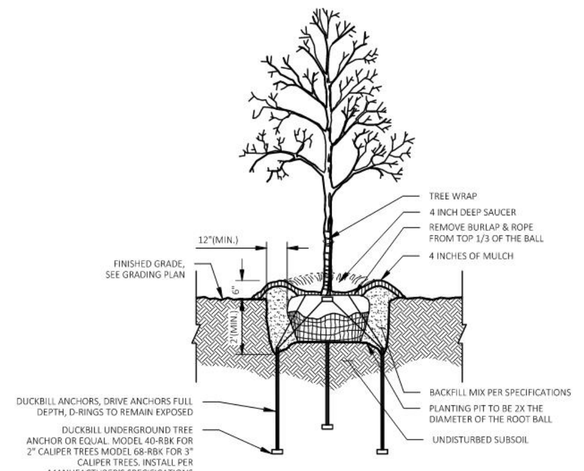
B. REPLACEMENT:
ANY PLANT UNDER THIS SPEC WHICH IS DEAD, MISSING, UNHEALTHY, OR OTHERWISE NOT ACCEPTABLE AND NOT IN SATISFACTORY GROWING CONDITION DURING CONSTRUCTION MAINTENANCE PERIOD, OR AT THE END OF THE GUARANTEE PERIOD, SHALL BE REMOVED FROM SITE AND REPLACED WITH SUITABLE, ACCEPTABLE PLANT AS SPECIFIED, WITHIN FIVE (5) DAYS.

C. MAINTENANCE:
GENERAL CONTRACTOR SHALL PROVIDE ONE YEAR OF LANDSCAPE MAINTENANCE, FROM THE TIME THE PROJECT RECEIVES THE CERTIFICATE OF OCCUPANCY AND THERE AFTER, FOR ALL NEW LANDSCAPE. IF EXISTING LANDSCAPE EXISTS ON-SITE, GENERAL CONTRACTOR IS TO PROVIDE THE OPTION OF MAINTENANCE FOR THE OWNER'S REVIEW.

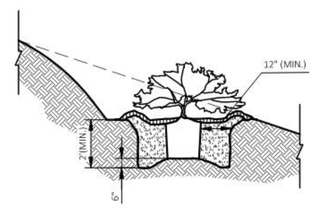
HERBICIDES NOTES

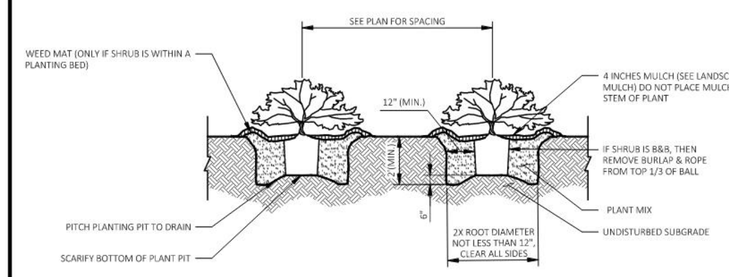
1. APPLICATION OF HERBICIDES SHALL BE IN COMPLIANCE WITH STATE PESTICIDES REGULATIONS. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO CONSULT WITH THE REGULATORY AGENCIES FOR LOCAL HERBICIDES APPLICATION REQUIREMENTS.
2. IF THERE IS A DISCREPANCY BETWEEN STATE REGULATIONS AND ADDITIONAL REQUIREMENTS BELOW, MOST STRINGENT SHALL RULE
3. NO AERIAL APPLICATION OF HERBICIDES IS PERMITTED ON SITE.
4. CARCINOGENS AND EPA TOXIC CATEGORY I AND II ARE PROHIBITED TO USE ON SITE.



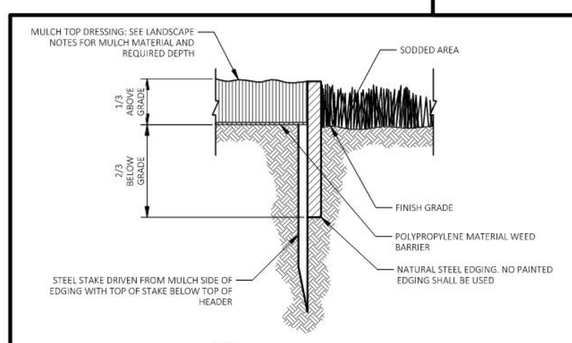


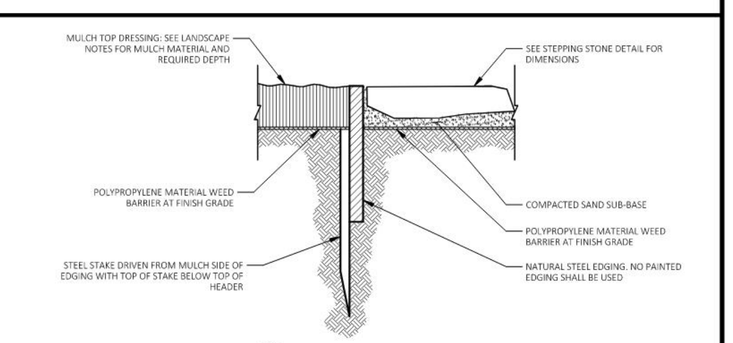
TREE PLANTING
N.T.S. 504





SHRUB PLANTING
N.T.S. 505





STEEL EDGING
N.T.S. 506

CEI ENGINEERING ASSOCIATES, INC.
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REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH
Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K

EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

Landscape Architect
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: Ryan Y. Evitts
Date:01/04/2024 License Number: 61267

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	MMP
CEI PROJECT NUMBER	33134
DATE	1/3/2024
REVISION	REV-0

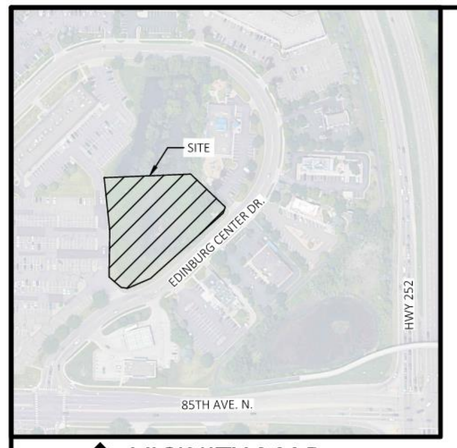
LANDSCAPE NOTES
SHEET TITLE

SHEET NUMBER
L1.1

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5.2D - PLAN SET



VICINITY MAP
NOT TO SCALE

ENGINEER
CEI ENGINEERING ASSOCIATES, INC
TRAVIS ALLEY
PROJECT MANAGER
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BENTONVILLE, AR 72712
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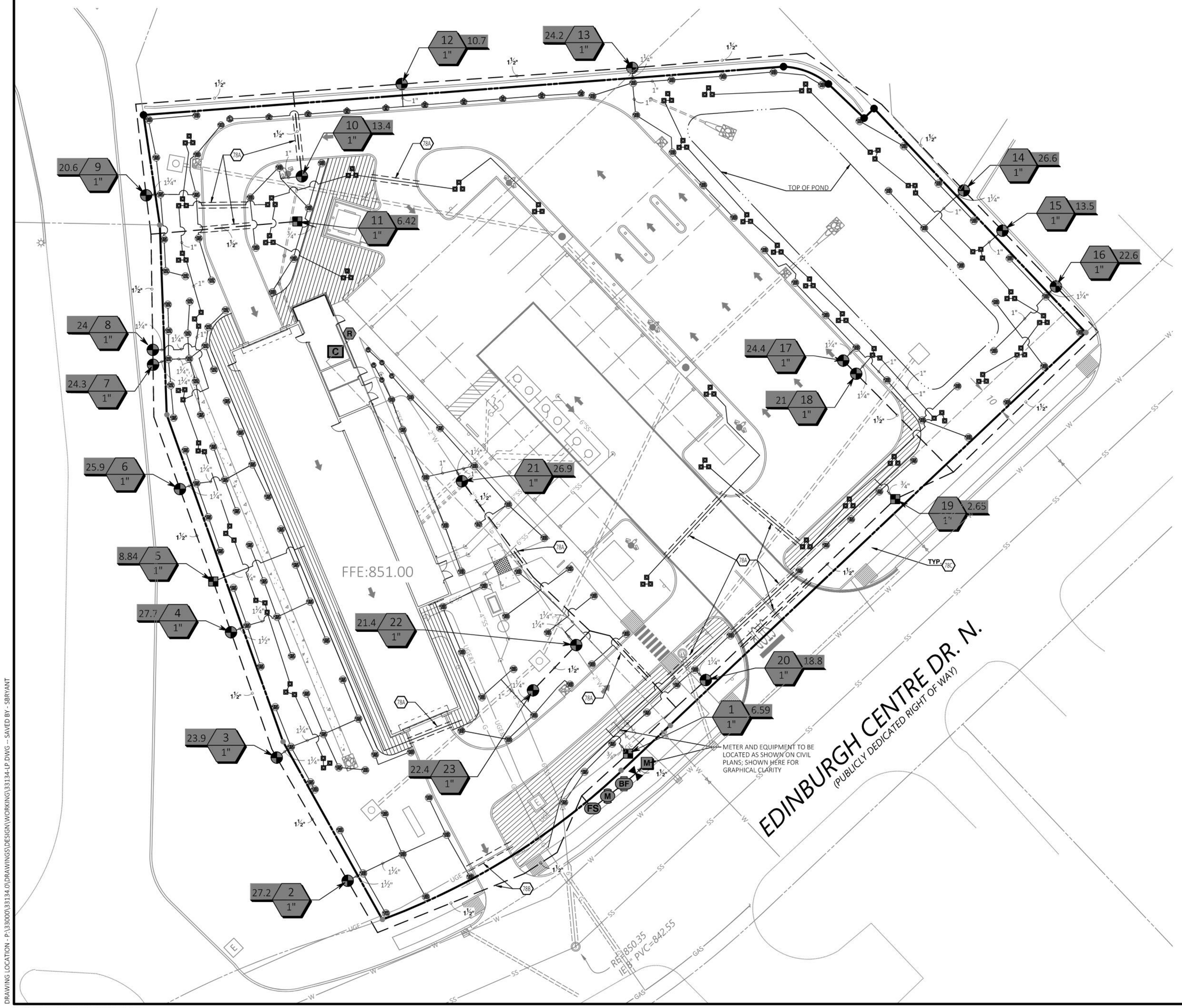
OWNER
ODYSSEY SERVICES GROUP, LLC
CHRIS JOHNSON
NORTHWEST ARKANSAS
CHRIS.JOHNSON@ODYSSEYSERVICESGROUP.COM
PHONE: (479) 402-4652

ARCHITECT
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MEGHAN.DAVIS@HFA-AE.COM.COM
PHONE: (479) 273-7780 EXT.269

NOTE:
SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, VESTIBULE, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

SITE BENCHMARK
SITE BENCHMARK #1: BM-251, ELEV.=854.91'. HYDRANT SOUTHWEST OF SITE

LOCATION OFF ALL IRRIGATION SYSTEM COMPONENTS IS FOR DRAWING PURPOSES ONLY. PIPES, VALVES, EQUIPMENT, ETC. MAY BE SHOWN IN PAVEMENT AREAS OR OUTSIDE OF PROPERTY LINES FOR CLARITY PURPOSES ONLY. EVERYTHING SHALL BE INSTALLED IN ADJACENT LANDSCAPE AREAS. ALL IRRIGATION SLEEVING IS BEING SHOWN IN CORRECT LOCATION, HOWEVER, CONTRACTOR IS TO COORDINATE WITH GC ON ANY AND ALL NEEDED SLEEVING. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL COMPONENTS IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF PROPOSED IRRIGATION SYSTEM. ALL PROPOSED IRRIGATION LINES AND EQUIPMENT SHALL BE INSTALLED WITHIN THE BOUNDARIES OF THE PROJECT SITE. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OR LICENSED IRRIGATOR IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.



IRRIGATION NOTES

78A IRRIGATION SLEEVE
78B IRRIGATION SLEEVE SHOWN IN PREFERRED LOCATION. IRRIGATION PIPING MAY BE SHOWN ELSEWHERE FOR GRAPHICAL CLARITY ONLY
78C ALL AREAS NOT COVERED BY AN AUTOMATIC IRRIGATION SYSTEM SHALL BE HAND WATERED UNTIL FULLY ESTABLISHED

Know what's below. Call before you dig.

0 20' 30' 40'
SCALE IN FEET

2024-01-04 14:32

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
EST LCS RCS CST SST	RAIN BIRD 1806-PRS 15 STRIP SERIES TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2" NPT FEMALE THREADED INLET. PRESSURE REGULATING.	1	30
4V 6V 18V	RAIN BIRD 1806-PRS ADJ TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2" NPT FEMALE THREADED INLET. PRESSURE REGULATING.	84	30
08HE-VAN 12HE-VAN 10HE-VAN 15HE-VAN	RAIN BIRD 1806-PRS ADJ TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2" NPT FEMALE THREADED INLET. PRESSURE REGULATING.	68	30
EST LCS RCS CST SST	RAIN BIRD 1806-PRS 15 STRIP SERIES TURF SPRAY 6.0" POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2" NPT FEMALE THREADED INLET. PRESSURE REGULATING.	9	30
1401 1402 1404 1408	RAIN BIRD RWS-B-C W/ RWS-SOCK 1400 SERIES ROOT WATERING SYSTEM WITH 4IN. DIAMETER X 36IN. LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE. CHECK VALVE AND SAND SOCK. RAIN BIRD BUBBLER OPTION AS INDICATED: 1401 0.25 GPM, 1402 0.5 GPM, 1404 1.0 GPM, 1408 2 GPM.	117	25

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	RAIN BIRD XCZLF-100-PRF 1" LOW FLOW, 0.2-10 GPM, WITH 1" LOW FLOW VALVE VALVE AND 1" PRESSURE REGULATING RBY FILTER AND 40PSI PRESSURE REGULATOR.	4
	AREA TO RECEIVE DRIPLINE RAIN BIRD XFS-04-12 XFS SUB-SURFACE PRESSURE COMPENSATING DRIPLINE W/COPPER SHIELD TECHNOLOGY. 0.4 GPH EMITTERS AT 12" O.C. LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. UV RESISTANT. SPECIFY XF INSERT FITTINGS.	3,656 L.F.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	RAIN BIRD PEB-PRS-D 1" 1", 1-1/2", 2" PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATOR MODULE.	19
	MATCO-NORCA 759T BRASS SHUT OFF BALL VALVE, 1/2" TO 1". TWO PIECE BODY, BLOW-OUT PROOF STEM, CHROME PLATED SOLID BRASS BALL, THREADED, WITH PTFE SEATS. WITH TEE HANDLE. SAME SIZE AS MAINLINE PIPE.	1
M	RAIN BIRD PESB-PRS-D 1-1/2" 1", 1-1/2", 2" PLASTIC INDUSTRIAL MASTER VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PRESSURE REGULATING MODULE, AND SCRUBBER TECHNOLOGY FOR RELIABLE PERFORMANCE IN DIRTY WATER IRRIGATION APPLICATIONS.	1
BF	WATTS U009 3/4" REDUCED PRESSURE BACKFLOW PREVENTER	1
C	RAIN BIRD ESPLXME2 W/ (1) ESPLXMSM12 24 STATION, TRADITIONALLY-WIRED, COMMERCIAL CONTROLLER. (1) ESPLXME2 12-STATION, INDOOR/OUTDOOR, PLASTIC WALL-MOUNT ENCLOSURE W/ (1) ESPLXMSM12 - 12-STATION EXPANSION MODULES.	1
R	RAIN BIRD RSD-BEX RAIN SENSOR, WITH METAL LATCHING BRACKET, EXTENSION WIRE.	1
FS	RAIN BIRD FS-100-B 1" FLOW SENSOR, BRASS MODEL. SUGGESTED OPERATING RANGE 2.0 GPM TO 40.0 GPM. SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE. RAIN BIRD COMPATIBLE CONTROLLERS: ESP-LXIVM(P) | LXD | LXME2(P) | ME3, OR CONTROLLERS ACCEPTING CUSTOM K-FACTOR AND OFFSET. INSTALL IN RAIN BIRD VALVE BOX.	1
M	WATER METER 1"	1
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 3/4"	3,141 L.F.
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1"	233.5 L.F.
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1 1/4"	152.4 L.F.
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1 1/2"	13.7 L.F.
	IRRIGATION MAINLINE: PVC SCHEDULE 40 1 1/2"	1,324 L.F.
	PIPE SLEEVE: PVC SCHEDULE 40	256.9 L.F.

Valve Callout
Valve Number
Valve Flow
Valve Size

CRITICAL ANALYSIS

Generated:	2024-01-04 14:29
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	37.5 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	70 PSI
Elevation Change:	5 ft
Service Line Size:	2"
Length of Service Line:	10 ft
Pressure Available:	68 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	27.68 GPM
Flow Available at POC:	37.5 GPM
Residual Flow Available:	9.82 GPM
Critical Station:	4
Design Pressure:	30 PSI
Friction Loss:	0.82 PSI
Fittings Loss:	0.08 PSI
Elevation Loss:	0 PSI
Loss through Valve:	4.97 PSI
Pressure Req. at Critical Station:	35.9 PSI
Loss for Fittings:	0.34 PSI
Loss for Main Line:	3.35 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	12.7 PSI
Loss for Master Valve:	3.67 PSI
Loss for Water Meter:	4.56 PSI
Critical Station Pressure at POC:	60.5 PSI
Pressure Available:	68 PSI
Residual Pressure Available:	7.49 PSI

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH
Powered by CIRCLE K

CLEAN FREAK CARWASH POWERED BY CIRCLE K
EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

Landscape Architect
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: Ryan Y. Evitts
Date:01/04/2024 License Number: 61267

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	MMP
CEI PROJECT NUMBER	33134
DATE	1/4/2024
REVISION	REV-0

IRRIGATION PLAN

SHEET TITLE

SHEET NUMBER

L2

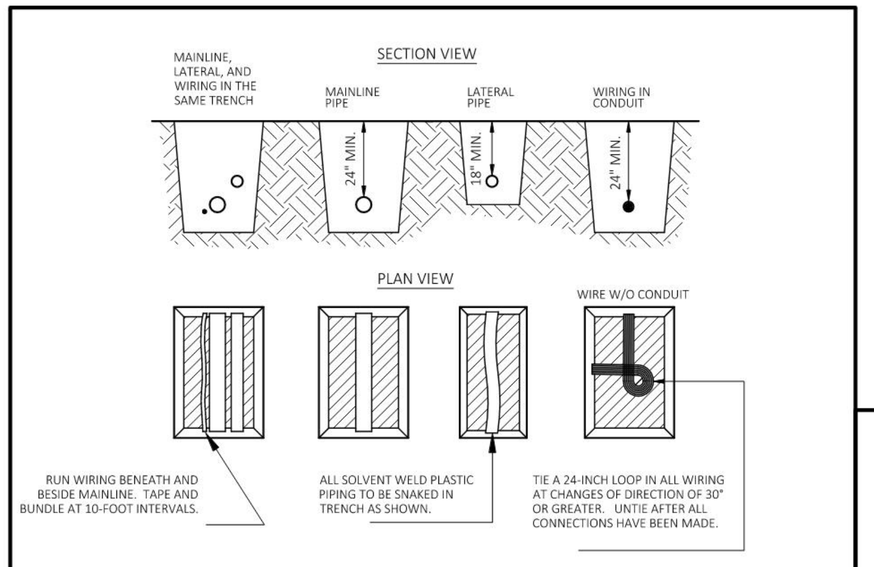
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5.2D - PLAN SET

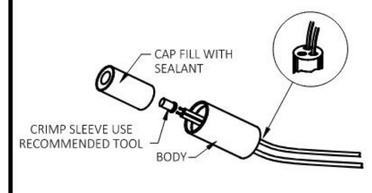
GENERAL IRRIGATION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A COPY OF THE PROJECT SPECIFICATIONS PRIOR TO BIDDING. THE PROJECT SPECIFICATIONS ARE A PART OF THESE PLANS AND SHALL BE CONSULTED BY THE IRRIGATION CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING WORK AS SPECIFIED IN THE PROJECT SPECIFICATIONS AND ON THE PLANS.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, AND UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
3. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OR LICENSED IRRIGATOR OF ANY DISCREPANCIES IN PLANS OR SPECIFICATIONS PRIOR TO BEGINNING OR CONTINUING WORK.
4. THE CONTRACTOR SHALL MAKE NO SUBSTITUTIONS, DELETIONS, OR ADDITIONS TO THIS PLAN WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT OR LICENSED IRRIGATOR.
5. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS.
6. CONTRACTOR IS TO VERIFY ACTUAL AVAILABLE WATER PRESSURE BEFORE BEGINNING INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OR LICENSED IRRIGATOR IF AVAILABLE WATER PRESSURE EXCEEDS 5 PSI HIGHER OR LOWER THAN THE DESIGN WATER PRESSURE OF 70 PSI.
7. IRRIGATION SYSTEMS CONNECTED TO POTABLE WATER SUPPLY, SHALL HAVE A BACKFLOW PREVENTER INSTALLED PER LOCAL REQUIREMENTS.
8. ANY EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. DO NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
9. SUPPLY LINE AND METER TO BE PROVIDED BY GENERAL CONTRACTOR. BACKFLOW PREVENTER TO BE PROVIDED BY IRRIGATION CONTRACTOR. IRRIGATION CONTRACTOR'S POINT OF CONNECTION TO BEGIN AFTER THE IRRIGATION WATER METER.
10. IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH OWNERS REPRESENTATIVE.
11. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN SO AS TO PROVIDE POSITIVE DRAINAGE OF IRRIGATION MAIN DURING WINTER MONTHS, OR PROVIDE BLOWOUT ASSEMBLY.
12. ALL LATERAL LINES SHALL BE EQUIPPED WITH AUTOMATIC DRAIN VALVES AT LOW POINTS.
13. IRRIGATION CONTRACTOR SHALL COORDINATE CONTROLLER LOCATION WITH GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE (2) 1" ELECTRICAL CONDUITS FOR IRRIGATION CONTRACTOR'S POWER/DATA CONNECTION TO CONTROLLER. SEE ARCHITECTURAL ELECTRICAL PLAN FOR ELECTRICAL CONNECTION TO THE IRRIGATION CONTROLLER. IRRIGATION CONTRACTOR SHALL COORDINATE CONSTRUCTION OF IRRIGATION SYSTEM WITH GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.
14. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
15. ALL BELOW GRADE LOW VOLTAGE WIRING CONNECTIONS SHALL BE INSTALLED PER WIRE CONNECTION DETAIL.
16. DO NOT INSTALL IRRIGATION AT PYLON / MONUMENT SIGN LOCATION UNTIL SIGN HAS BEEN INSTALLED.
17. LOCATION FOR IRRIGATION SYSTEM AS SHOWN IS FOR DRAWING PURPOSES ONLY. UNSLEEVED PIPES MAY BE SHOWN IN PAVEMENT AREAS FOR CLARITY ONLY. INSTALL THESE PIPES IN ADJACENT LANDSCAPE AREAS WHERE NECESSARY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF PROPOSED IRRIGATION SYSTEM. ALL PROPOSED IRRIGATION LINES AND EQUIPMENT SHALL BE INSTALLED WITHIN THE BOUNDARIES OF THE PROJECT SITE. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OR LICENSED IRRIGATOR IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.
18. MINIMUM COVER FROM TOP OF PIPING TO FINISHED GRADE SHALL BE AS PER DETAIL 64A.
19. IRRIGATION CONTRACTOR SHALL COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
20. VALVE BOXES SHALL BE INSTALLED FLUSH WITH GRADE, SUPPORTED BY BRICKS IF NEEDED, WITH 3" OF CLEAN PEA GRAVEL LOCATED BELOW THE VALVE.
21. ALL MAIN LINE PIPING, NON-PRESSURE PIPING AND CONTROL WIRE SLEEVING SHALL BE INSTALLED IN SEPARATE SLEEVES. ALL LATERAL LINE PIPING UNDER PAVING SHALL BE PVC SHEDULE 40 AND SHALL BE INSTALLED PRIOR TO ANY HARDSCAPE MATERIAL. IRRIGATION CONTRACTOR TO PROVIDE SLEEVES BETWEEN 12" AND 15" BELOW GRADE AT ALL DRIVE ENTRANCES AND SIDEWALKS. MAINLINE SLEEVE SIZE SHALL BE A MINIMUM OF TWICE (2X) THE DIAMETER OF THE PIPE TO BE SLEEVED. CONTROL WIRE SLEEVES SHALL BE OF SUFFICIENT SIZE FOR THE REQUIRED NUMBER OF WIRES.
22. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF FENCES, RETAINING WALLS, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS, UNDER ROADWAYS AND PAVING AND TIMING, ETC. REFER TO CIVIL ENGINEERING PLANS FOR GRADING, METHODS OF DRAINAGE, IRRIGATION METERS, AND BACKFLOW PREVENTION DEVICE LOCATION.
23. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED, SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS, DETAILS AND SPECIFICATIONS. ACCEPTABLE MANUFACTURERS INCLUDE RAINBIRD, HUNTER, OR NETAFIM
24. ANY DRIP SYSTEM PIPING IN PLANTING BEDS IS DIAGRAMMATIC. CONTRACTOR CAN ROUTE PIPING IN A FREEFORM MANNER (AVOIDING OBJECTS SUCH AS LIGHT POLES, TRANSFORMERS PADS, EQUIPMENT VAULTS, SUBSURFACE ROCK TOO LARGE TO REMOVE, ETC...) AS LONG AS ALL PLANT MATERIAL RECEIVES THE PROPER NUMBER OF EMITTERS PER SCHEDULE AND THE VINYL DISTRIBUTION TUBING DOES NOT EXCEED THE MAXIMUM DESIGN LENGTHS PER MANUFACTURER'S RECOMMENDATIONS.
25. UNLESS OTHERWISE REQUIRED, BACKFLOW PREVENTION DEVICES LESS THAN 2" SHALL BE PLACED IN A WIRE MESH BASKET ENCLOSURE AND PAINTED TO MATCH THE PRIMARY BUILDING COLORS. SEE CIVIL PLANS FOR LOCATION.
26. ALL JOINTS AND BENDS 2" OR LARGER SHALL HAVE CONCRETE THRUST BLOCKING. THRUST BLOCKING SHALL BE A MINIMUM OF 1 CUBIC FOOT OF CONCRETE. PIPE SHALL NOT BE ENCASED IN CONCRETE. SEE DETAIL 31C FOR THRUST BLOCKING ON CIVIL PLANS.
27. CONTRACTOR WILL PROVIDE OWNER WITH A COMPLETE AND REPRODUCIBLE DRAWING OR IRRIGATION SYSTEM LAYOUT AS IT WAS INSTALLED. DRAWING SHOULD INCLUDE, BUT NOT BE LIMITED TO, LOCATIONS OF ZONES VALVES, MAIN, LATERAL AND DISTRIBUTION LINES, SLEEVES, WATER METER, BACKFLOW PREVENTION DEVICE, SENSORS AND CONTROLLER.
28. ALL LATERAL LINE SIZING SHALL REFER TO LABELS AND PIPE SCHEDULE. **ALL LATERALS NOT LABELED SHALL BE 3/4" MIN.**



NOTES:
1. UNLESS OTHERWISE NOTED ON PLANS ALL LATERAL LINES SHALL BE SDR-13.5 OR SDR-21/CLASS 200 PVC PIPE. ALL MAIN LINES SHALL BE SCHEDULE 40 PVC PIPE.
2. SLEEVES BELOW ALL HARDSCAPE ELEMENTS SHALL BE SCH. 40 PVC AND SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
3. ALL LATERAL LINES SHALL BE BURIED NO LESS THAN 18" DEEP. ALL MAIN LINES AND ELECTRICAL LINES SHALL BE NO LESS THAN 24" DEEP.

IRRIGATION PIPE AND WIRE TRENCHING
N.T.S. 64A



WIRE CONNECTION
N.T.S. 64A

CEI ENGINEERING ASSOCIATES, INC.
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
PHONE: (479) 273-9472
FAX: (479) 273-0844

REVISION

NO.	DESCRIPTION	DATE

CLEANFREAK CAR WASH
Powered by CIRCLE K

POWERED BY CIRCLE K

CLEAN FREAK CARWASH

EDINBURGH CENTRE DR.
BROOKLYN PARK, MN

Landscape Architect
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Landscape Architect under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: Ryan Y. Evitts
Date:01/04/2024 License Number: 61267

PROFESSIONAL OF RECORD	AED
PROJECT MANAGER	TJA
DESIGNER	MMP
CEI PROJECT NUMBER	33134
DATE	1/3/2024
REVISION	REV-0

IRRIGATION NOTES AND DETAILS
SHEET TITLE

SHEET NUMBER
L2.1

DRAWING LOCATION - P:\33000\33134.01\DRAWINGS\DESIGN\WORKING\33134-LP.DWG -- SAVED BY - SBRYANT

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5.2D - PLAN SET

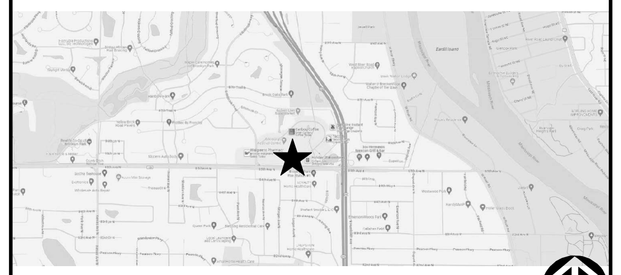
TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN



PERMIT
01/10/24

VICINITY MAP



ABBREVIATIONS

ABBR	DEFINITION
AFF	ABOVE FINISH FLOOR
ARCH	ARCHITECTURAL
BFF	BELOW FINISH FLOOR
BO	BOTTOM OF
BRG	BEARING
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONT	CONTINUOUS
DIA	DIAMETER
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ETR	EXISTING TO REMAIN
EQ	EQUAL
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FRP	FIBERGLASS REINFORCED PLASTIC
FTF	FINISH TO FINISH
FURN	FURNISHED
FV	FIELD VERIFY
GA	GAUGE
GC	GENERAL CONTRACTOR
GYP BD	GYPSUM BOARD
ISA	INTERNATIONAL SYMBOL OF ACCESSSIBILITY
LL	LANDLORD
MAX	MAXIMUM
MBM	METAL BUILDING MANUFACTURER
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OH	OPPOSITE HAND
PLAM	PLASTIC LAMINATE
PT	PRESSURE TREATED
REF	REFERENCE
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
SIM	SIMILAR
SOW	SCOPE OF WORK
SK	SERVICE KING
STRUC	STRUCTURAL
T	TEMPERED GLASS
TO	TOP OF
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WH	WATER HEATER
WRB	WEATHER/ WATER RESISTIVE BARRIER

SYMBOLS LEGEND

- SB01 — EQUIPMENT INDICATOR
- P3 — MATERIAL INDICATOR
- 8 / A3 — FULL AND PARTIAL SECTION INDICATOR
- 8-A3 — EXTERIOR AND INTERIOR ELEVATION INDICATOR
- OFFICE / 100 — ROOM NAME AND NUMBER
- S1 — STOREFRONT INDICATOR
- D-100 — DOOR INDICATOR
- A — COLUMN LINE INDICATOR
- 100'-0" FF EL — HEIGHT ELEVATION INDICATOR
- 1 / A100 — ENLARGED DETAIL INDICATOR
- NORTH ARROW

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN A SAFE AND WORKMANLIKE MANNER AND IN STRICT ACCORDANCE WITH THE LOCAL AND/OR STATE (IF APPLICABLE) BUILDING CODES, NATIONAL ELECTRIC CODE (NEC), ADA-ADAAGS (ADOPTED HANDICAP ACCESSIBILITY REQUIREMENTS), OSHA AND ALL APPLICABLE CODES, REGULATIONS, ORDINANCES, AND AUTHORITIES HAVING JURISDICTION.
2. ALL SUBCONTRACTORS ARE RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS IN THEIR RELATED FIELD. THE FAILURE TO ACQUAINT THEMSELVES WITH THIS KNOWLEDGE DOES NOT RELIEVE THEM OF ANY RESPONSIBILITY FOR PERFORMING THEIR WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE.
3. THE CONTRACTOR SHALL KEEP WORK AREA CLEAN AND FREE OF DEBRIS AND IS TO REMOVE ALL TRASH AND DEBRIS FROM THE CONSTRUCTION AREA DAILY. NO FLAMMABLE MATERIALS OR LIQUIDS MAY BE STORED IN THE EXISTING BUILDING OR ANY NEW ADDITION.
4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF ALL PERSONS ON THE JOB SITE AT ALL TIMES, INCLUDING BUT NOT LIMITED TO ALL SUBCONTRACTORS, VENDORS, DESIGN STAFF PROFESSIONALS, AND INSPECTION PERSONNEL.
5. FIRE EXTINGUISHERS TO BE INSTALLED 2020 MINNESOTA FIRE CODE (SECTION 906). LOCATION APPROVED BY LOCAL FIRE MARSHAL.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY ORDERING OF MATERIALS TO PROHIBIT DELAYS OF THE CONSTRUCTION SCHEDULE OF THIS PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE DELIVERY OF MATERIALS IN A TIMELY MANNER.
7. THE GENERAL CONTRACTOR SHALL RESPOND TO ALL REQUIREMENTS OF THE STRUCTURAL ENGINEER/ARCHITECT FOR VERIFICATIONS, RESPONSES AND SUBMISSIONS.
8. DURING ENTIRE CONSTRUCTION PERIOD, PROVIDE ONE U.L. LISTED TYPE 2A FIRE EXTINGUISHER, FOR EVERY 3,000 SF OF AREA, TRAVEL DISTANCE TO FIRE EXTINGUISHER NOT TO EXCEED 100 FEET.
9. ALL MATERIALS SHALL TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND ALL SUBCONTRACTORS ARE TO ENSURE THAT ALL MANUFACTURERS WARRANTIES WILL BE HONORED.
10. ALL CONSTRUCTION MATERIAL, TECHNIQUES AND PERFORMANCE VALUES SHALL MEET APPLICABLE CODES INDICATED IN "PROJECT DATA" TABLE LISTED ON THIS SHEET.
11. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT IS CONSTRUCTED IN ACCORDANCE WITH THESE DOCUMENTS AND IN COMPLIANCE WITH CODES INDICATED HEREIN. THE QUALITY OF WORKMANSHIP AND INSTALLATION OF MATERIALS SPECIFIED BY THE ARCHITECT ARE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR. THE ARCHITECT WILL NOT BE HELD RESPONSIBLE FOR ANY SUBSTANDARD OR INSUFFICIENT WORKMANSHIP, MATERIALS OR SERVICES PROVIDED IN THE EXECUTION OF ANY PHASE OF CONSTRUCTION OF THIS PROJECT.
12. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL RELY ON WRITTEN DIMENSIONS AS GIVEN. LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS.
13. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BIDDING

MATERIAL LEGEND

- CONCRETE (SECTION)
- CONCRETE (PLAN)
- RIGID INSULATION
- PLYWOOD
- BLOCKING OR SHIM
- NOMINAL CUT LUMBER
- EARTH
- GYPSUM BOARD
- BATT INSULATION

PROJECT TEAM

OWNER: TRUE BLUE CAR WASH
1255 W. RIO SALADO PKWY, STE 111
TEMPE, AZ
(602)-614-4823
KATHY HALTER

ARCHITECTURAL: HFA
1705 S WALTON BLVD, SUITE 3
BENTONVILLE, AR 72712
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MEGHAN DAVIS

STRUCTURAL: HFA
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TIGER TSAO

MECHANICAL ELECTRICAL PLUMBING: HFA
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JAIME CASTAÑEDA

CIVIL: CEI ENGINEERING ASSOCIATES, INC
3108 SW REGENCY PKWY
BENTONVILLE, AR 72712
(479)-715-4123
ERIN DUDLEY

PROJECT DATA AND BUILDING CODE SUMMARY

PROJECT ADDRESS:	8595 EDINBURGH CENTER DR BROOKLYN PARK, MN 55443
PROPOSED USE:	CAR WASH
NET INTERIOR SQUARE FOOTAGE:	4,929 SQ FT
GROSS BUILDING SQUARE FOOTAGE:	5,261 SQ FT
CONDITIONED SQUARE FOOTAGE: (OFFICE/MECHANICAL)	1,304 SQ FT
CONDITIONED SQUARE FOOTAGE: (WASH TUNNEL)	3,625 SQ FT
ALLOWABLE AREA PER FLOOR:	GROUP B = 9,000 SQ FT
STORIES:	1 STORY
ALLOWABLE STORIES:	GROUP B =2 STORIES
PROJECT HEIGHT:	30' - 0"
ALLOWABLE HEIGHT:	40' - 0"
BUILDING FRONTAGE:	+/- 39' - 0" (NORTH) +/- 114' - 0" (WEST) +/- 39' - 0" (SOUTH) +/- 146' - 3" (EAST)
OCCUPANCY CLASSIFICATION: (CHAPTER 3 IBC)	B - (OFFICE/BUSINESS)
TYPE OF CONSTRUCTION: (CHAPTER 6 IBC)	TYPE V-B (NON-SPRINKLERED)
APPLICABLE CODES:	2020 MINNESOTA BUILDING CODE 2020 MINNESOTA MECHANICAL CODE 2020 MINNESOTA PLUMBING CODE 2020 MINNESOTA FIRE CODE 2023 NEC (NATIONAL ELECTRICAL CODE) 2020 MINNESOTA ACCESSIBITY CODE 2024 MINNESOTA COMMERCIAL ENERGY CODE

SHEET INDEX - REVISION HISTORY

SHEET NO.	SHEET NAME	CURRENT REVISION REV	DESC	DATE
GENERAL				
G100	COVER SHEET			
G101	LIFE SAFETY PLAN AND CODE SUMMARY			
G102	ACCESSIBILITY DETAILS			
STRUCTURAL				
S001	DESIGN CRITERIA, GENERAL, FOUNDATION, SUBGRADE & MATERIAL STRUCTURAL NOTES			
S002	MATERIAL STRUCTURAL & SPECIAL INSPECTION NOTES			
S003	SPECIAL INSPECTION NOTES			
S100	FOUNDATION PLAN			
S102	PAY STATION & VACUUM CANOPY PLAN			
S101	TRENCH PLAN, ELEVATION AND DETAILS			
S120	ROOF FRAMING PLAN			
S130	STRUCTURAL ELEVATIONS			
S200	FOUNDATION DETAILS			
S201	FOUNDATION DETAILS			
S300	MASONRY DETAILS			
S301	MASONRY DETAILS			
S400	STEEL FRAMING DETAILS			
S800	DUMPSTER & VACUUM ENCLOSURE			
S801	PAY STATION & VACUUM CANOPIES DETAILS			
S900	ISOMETRIC VIEWS			
ARCHITECTURE				
A001	ARCHITECTURAL SITE PLAN			
A002	DUMPSTER ENCLOSURE PLAN AND DETAILS			
A003	VAC ENCLOSURE PLANS AND DETAILS			
A100	FLOOR PLAN AND NOTES			
A110	ENLARGED FLOOR PLANS AND ELEVATIONS			
A120	FLOOR FINISH PLAN AND FINISH LEGEND			
A121	TRENCH PLAN & DETAILS			
A130	REFLECTED CEILING PLAN			
A140	ROOF PLAN			
A142	ROOF DETAILS			
A150	EQUIPMENT PLAN & SCHEDULE			
A200	EXTERIOR ELEVATIONS			
A300	BUILDING SECTIONS			
A310	WALL SECTIONS			
A311	WALL SECTIONS			
A312	WALL SECTIONS			
A400	MILLWORK AND INTERIOR ELEVATIONS			
A500	EXTERIOR DETAILS			
A501	EXTERIOR DETAILS			
A502	EXTERIOR DETAILS			
A510	INTERIOR DETAILS			
A600	STOREFRONT, DOOR, & HARDWARE SCHEDULES			
PLUMBING				
MP100	MECHANICAL & PLUMBING SPECIFICATIONS			
P100	PLUMBING SITE PLAN			
P101	BELOW SLAB PLUMBING PLAN			
P200	WATER PLAN			
P201	GAS PLAN			
P202	COMPRESSED AIR PLAN			
P300	PLUMBING DETAILS			
P301	PLUMBING DETAILS			
P400	PLUMBING SCHEDULES			
P401	PLUMBING RISER DIAGRAM			
MECHANICAL				
M100	MECHANICAL PLAN			
M200	MECHANICAL DETAILS			
M201	MECHANICAL SCHEDULES			
ELECTRICAL				
E001	ELECTRICAL SYMBOLS, NOTES, SPECIFICATIONS			
E002	ELECTRICAL SITE PLAN			
E003	SITE PHOTOMETRICS PLAN PLAN			
E101	LIGHTING PLAN			
E111	POWER PLAN			
E112	EQUIPMENT PLAN			
E601	ELECTRICAL SCHEDULES AND ONE-LINE DIAGRAM			
E602	ELECTRICAL PANEL SCHEDULES			

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY: JMC
DRAWN BY: MND
DOCUMENT DATE: 01/10/24

ARCHITECTS
I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota

Print Name: **JAMES EDWARD MANN**
Signature:
Date: 2024.01.10 14:46:47-06'00'
License #: **55742**

COVER SHEET

SHEET: G100

1/10/2024 1:59:53 PM
C:\Users\meghan.davis\Documents\2022 Revit Projects\06-23-80005 True Blue Corwash - Brooklyn Park, MN_ARCH_V22_HFA.Meghan.Davis.rvt
Q:\06-COVER SHEET

5.2D - PLAN SET

PLUMBING FIXTURE COUNTS

OCCUPANT LOAD OF OCCUPIED SPACES: (NOT INCLUDING WASH TUNNEL)	8 (EXCLUDING WASH TUNNEL)
GENDER LOAD DISTRIBUTION:	PER 2020 MNBC SECTION 2902.2 EXCEPTION 2, LESS THAN 25 OCCUPANTS WILL NOT REQUIRE SEPARATE FACILITIES FOR EACH GENDER
LAVATORIES REQUIRED (PER CHAPTER 29 MNBC):	8/ 80 = 1
LAVATORIES PROVIDED:	1 LAVATORY
WATER CLOSETS REQUIRED (PER CHAPTER 29 MNBC):	8 / 50 = 1
WATER CLOSETS PROVIDED:	1 WATER CLOSETS
DRINKING FOUNTAINS REQUIRED: (PER CHAPTER 29 MNBC SECTION 2902.1)	PER 2020 MNPC SECTION 2902.1 DRINKING FOUNTAINS SHALL NOT BE REQUIRED FOR OCCUPANT LOAD 50 OR FEWER
SERVICE SINK REQUIRED: (PER CHAPTER 29 MNBC SECTION 2902.1)	PER 2020 MNBC SECTION 2902.1 EXCEPTION E BUISNESS WITH OCCUPANT LOAD OF 50 OR FEWER SHALL NOT BE REQUIRED.

EGRESS

DISTANCE OF TRAVEL - TABLE 1017.2
2020 MNBC — 200'-0" UNSPRINKLERED

EGRESS WIDTH REQUIRED PER MNBC - SECTION 1005.3.2
EGRESS INCHES REQUIRED: 0.20 INCHES PER PERSON SERVED

EGRESS WIDTH REQUIRED (INCHES) EQUALS:
(AREA OCCUPANT LOAD) x (EGRESS WIDTH PER PERSON SERVED)

8 OCCUPANTS	X	.20	=	**1.6**	**CALCULATED INCHES REQUIRED**
(1) 3'-0" DOOR		X	33	=	33 INCHES
(1) 6'-0" DOOR		X	70	=	70 INCHES
TOTAL INCHES REQUIRED:					**32 INCHES**
TOTAL INCHES PROVIDED:					**103 INCHES**

OCCUPANT LOAD - TABLE 1004.5

OCCUPANCY	OCCUPANT LOAD BASED ON NET SQUARE FOOTAGE: AREA	AREA PER OCCUPANT	OCCUPANT LOAD
BUSINESS	359 SF	150 SF	3
BUSINESS - WASH TUNNEL	3625 SF	300 SF	13
STORAGE	945 SF	300 SF	4
	4929 SF		20

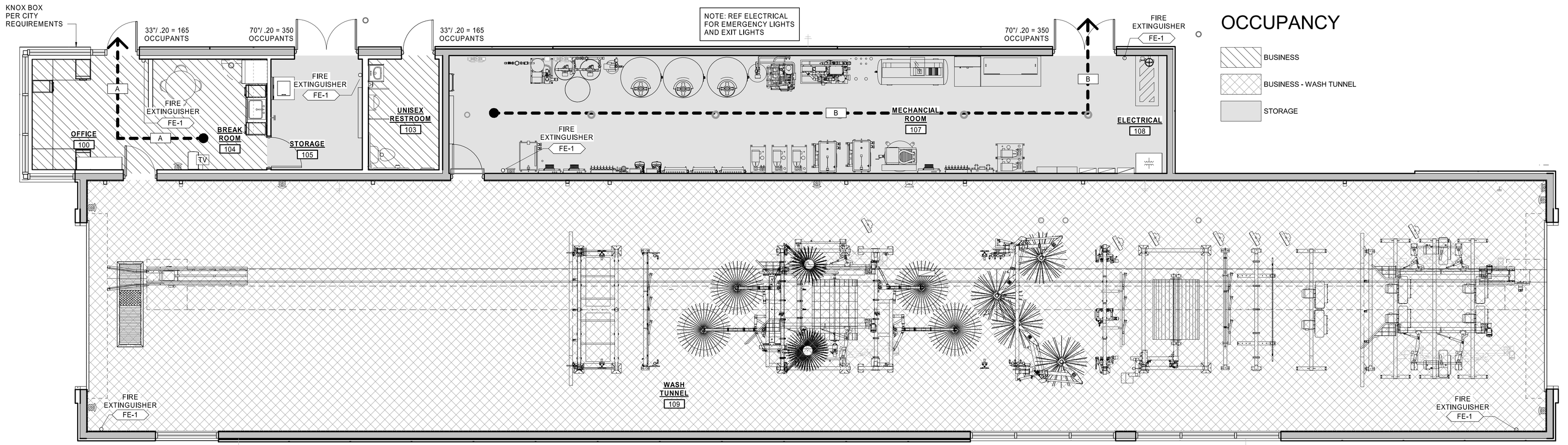
EGRESS PATH

EXIT PATH	EXIT PATH DISTANCE
A	18' - 4"
B	68' - 0"

FIRE EXTINGUISHERS SCHEDULE

MARK	DESCRIPTION	MFR	MODEL	QTY
FE-1	5 LB ABC DRY CHEMICAL FIRE EXTINGUISHER	---	5 LB ABC	6

NOTE: WALL HUNG FIRE EXTINGUISHERS - MOUNT @ 42" AFF, NO MORE THAN 5'-0" AFF. PER 2020 MINNESOTA FIRE CODE (SECTION 906). LOCATION APPROVED BY LOCAL FIRE MARSHAL. INSTALL FIRE EXTINGUISHER SIGNAGE PER FIRE CODE.



1 LIFE SAFETY PLAN
3/16" = 1'-0"

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	JMC
DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

ARCHITECTS
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota

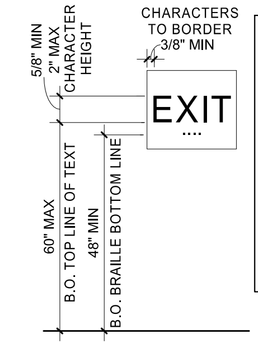
Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:46:56-06'00'
License #: 55742

LIFE SAFETY PLAN AND CODE SUMMARY

SHEET: G101

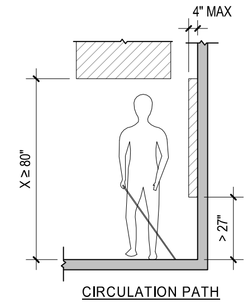
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G101-LIFE SAFETY PLAN AND CODE SUMMARY

5.2D - PLAN SET



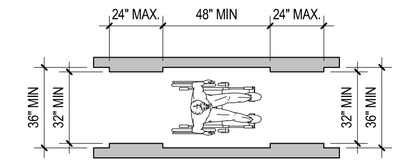
NOTE: A SIGN STATING "EXIT" IN RAISED CHARACTERS AND BRAILLE SHALL BE PROVIDED ADJACENT TO EACH EXIT DOOR. RAISED CHARACTERS SHALL BE RAISED 1/32" MIN ABOVE THEIR BACKGROUND. CHARACTERS SHALL BE UPPERCASE SANS SERIF. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH AND BE CONTRASTING COLORS. BRAILLE SHALL BE BELOW THE CORRESPONDING TEXT. BRAILLE SHALL BE SEPARATED 3/8" MINIMUM FROM ANY OTHER RAISED CHARACTERS, RAISED BORDERS, AND DECORATIVE ELEMENTS.

9 EXIT SIGNAGE
1/4" = 1'-0"

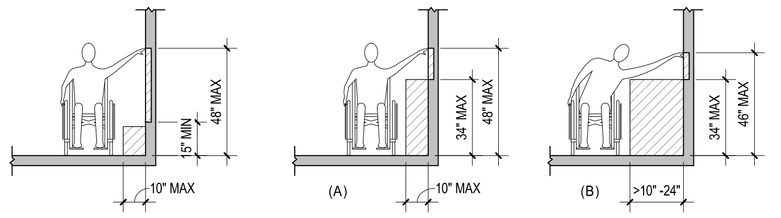


CIRCULATION PATH
LIMITS OF PROTRUDING OBJECTS

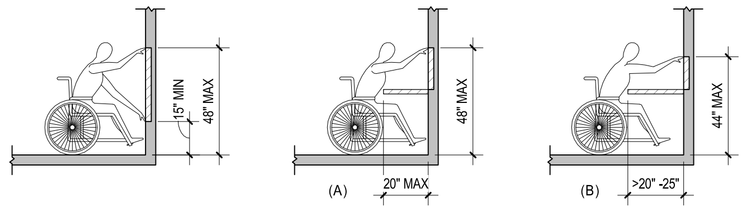
8 PROTRUDING OBJECTS
1/4" = 1'-0"



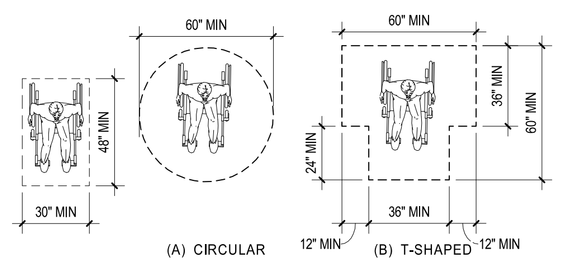
7 CLEAR WIDTH - ACCESSIBLE ROUTE
1/4" = 1'-0"



UNOBSTRUCTED SIDE REACH — OBSTRUCTED HIGH SIDE REACH



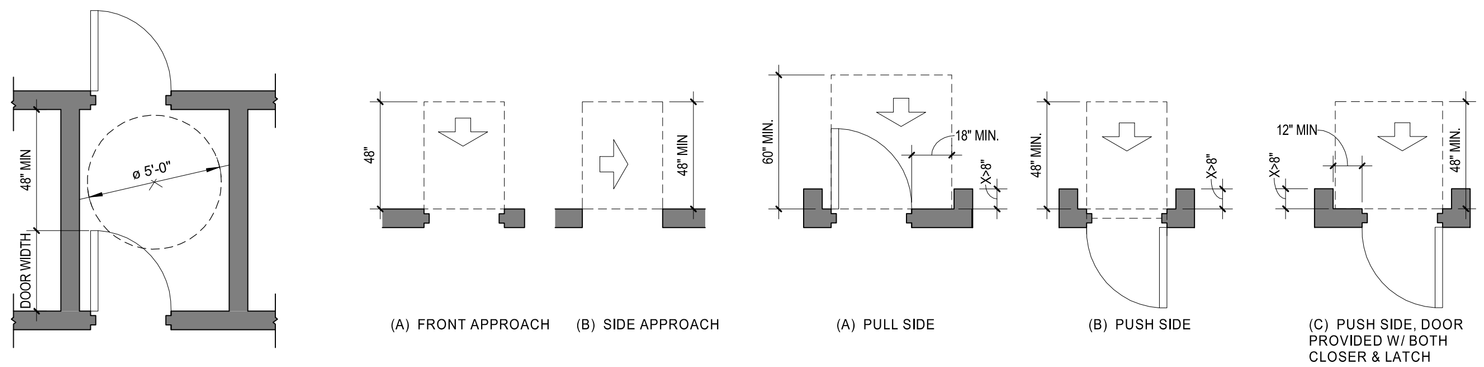
UNOBSTRUCTED FORWARD REACH — OBSTRUCTED HIGH FORWARD REACH



(A) CIRCULAR (B) T-SHAPED

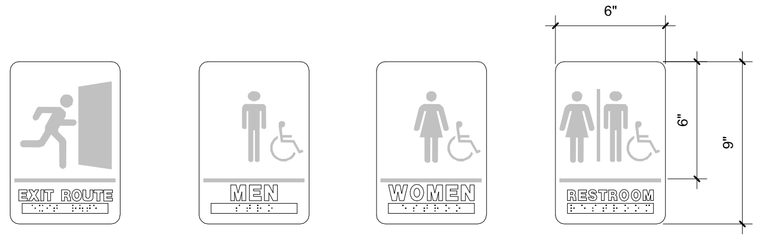
6 CLEAR TURNING SPACE
1/4" = 1'-0"

4 ACCESSIBLE REACH
1/4" = 1'-0"

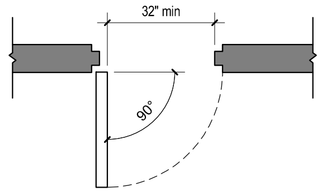


TWO DOORS IN A SERIES — MANEUVERING CLEARANCES AT DOORWAYS WITHOUT DOORS — MANEUVERING CLEARANCES AT RECESSED DOORS

1.	RAISED CHARACTERS SHALL BE 48 INCHES MINIMUM ABOVE THE FLOOR, MEASURED TO THE BASELINE OF THE LOWEST RAISED CHARACTER AND 60 INCHES ABOVE THE FLOOR, MEASURED TO THE BASELINE OF THE HIGHEST RAISED CHARACTER.
2.	BRAILLE SHALL BE 48 INCHES MINIMUM AND 60 INCHES MAXIMUM ABOVE THE FLOOR, MEASURED TO THE BASELINE OF THE BRAILLE CELLS.
3.	SIGN SHALL COMPLY WITH 2020 MINNESOTA ACCESSIBILITY CODE

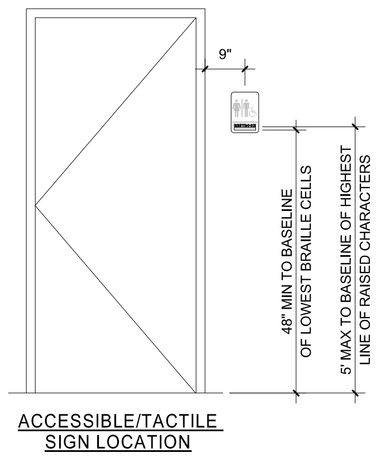


EXIT ROUTE — MEN'S RESTROOM — WOMEN'S RESTROOM — RESTROOM



3 CLEAR WIDTH HINGED DOOR
3/8" = 1'-0"

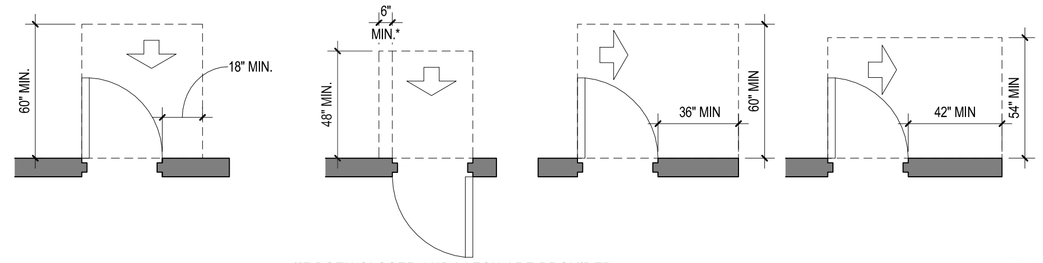
GENERAL NOTES:
1. SIGN TO BE ADHESIVE ACRYLIC WITH RAISED CHARACTERS WITH A MINIMUM HEIGHT OF 5/8" AND MAXIMUM HEIGHT OF 2" ACCOMPANIED BY GRADE 2 BRAILLE
2. PICTOGRAMS SHALL HAVE THE EQUIVALENT VERBAL DESCRIPTION LISTED DIRECTLY BELOW
3. CHARACTERS, SYMBOLS AND THEIR BACKGROUNDS SHALL HAVE A NON-GLARE FINISH WITH CHARACTERS AND SYMBOLS THAT CONTRAST WITH THE BACKGROUND
4. SIGN TO BE MOUNTED ALONG THE DOOR ON LATCH SIDE, SEE DIAGRAM RIGHT, WHEN SIGN OCCURS AT DOUBLE DOORS, MOUNT TO THE RIGHT OF THE RIGHT-HAND DOOR. WHEN WALL SPACE IS NOT AVAILABLE IN THE ABOVE LOCATIONS, SIGN TO BE INSTALLED ON THE NEAREST ADJACENT WALL
5. PROVIDE 18"x18" CLEAR FLOOR AREA CENTER ON SIGN, BEYOND THE ARC OF ANY DOOR SWING
6. SIGNS TO BE BLACK BACKGROUND WITH WHITE LETTERS, TYP
7. ALL DOOR SIGNS ARE PROVIDED AND INSTALLED BY THE CONTRACTOR. DOOR SIGNAGE SHALL COMPLY WITH ADA INCLUDING CHARACTER HEIGHT AND PROPORTION, BRAILED CHARACTERS, FINISH AND CONTRAST, INTERNATIONAL SYMBOL OF ACCESSIBILITY AND MOUNTING HEIGHTS
8. SIGN SHALL COMPLY WITH 2020 MINNESOTA ACCESSIBILITY CODE



ACCESSIBLE/TACTILE SIGN LOCATION

ACCESSIBLE TACTILE SIGNS & PLACEMENT

2 ACCESSIBLE/TACTILE SIGNS & PLACEMENT
1/2" = 1'-0"



*IF BOTH CLOSER AND LATCH ARE PROVIDED.

*IF BOTH CLOSER AND LATCH ARE PROVIDED.
** 48" MIN IF BOTH CLOSER AND LATCH ARE PROVIDED. * 54" MIN IF CLOSER IS PROVIDED. * 48" MIN IF CLOSER IS PROVIDED.

(A) FRONT APPROACH, PULL SIDE (B) FRONT APPROACH, PUSH SIDE (C) HINGE APPROACH, PULL SIDE (D) HINGE APPROACH, PUSH SIDE (E) HINGE APPROACH, PUSH SIDE (F) LATCH APPROACH, PULL SIDE (G) LATCH APPROACH, PUSH SIDE

MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS

1 MANEUVERING CLEARANCE AT DOORS AND DOORWAYS
1/4" = 1'-0"

HFA
HFA-AE , LTD.
t 479.273.7780
1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ae.com

STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR USE BY HFA-AE, LTD. ON THE BROOKLYN PARK, MN PROJECT AND MAY NOT BE USED WITH ITS ISSUE DATE ON 01/10/24 AND IT IS NOT TRANSFERABLE TO ANY OTHER PROJECT OR LATER DATE OR AT A LATER TIME. USE OF THIS DRAWING IN WHOLE OR IN PART FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT WITHOUT THE EXPRESS SERVICES OF PROFESSIONALLY LICENSED ARCHITECTS AND ENGINEERS, AUTHORIZING THE USE OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS PROHIBITED AND WILL BE AT CONTRACTOR'S TO THE ARCHITECTS AND ENGINEERS.

TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	JMC
DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

ARCHITECTS
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota
Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:47:35-06'00'
License #: 55742

ACCESSIBILITY DETAILS

SHEET: G102

1/10/2024 2:00:03 PM
C:\Users\meghan.davis\Documents\2023 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_ARCH_V22_ HFA.Meghan.Davis.rvt
G102-ACCESSIBILITY DETAILS

5.2D - PLAN SET

REINFORCED CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE ACI BUILDING CODE FOR REINFORCED CONCRETE (ACI 318-14) AND TO THE STATE BUILDING CODES. IN CASE OF CONFLICT, THE STATE BUILDING CODES SHALL GOVERN. FOR APPLICABLE BUILDING CODES, REFER TO THE DESIGN CRITERIA NOTES, ON DWG. S001.

2. ALL CONCRETE SHALL BE CONTROLLED, MIXED AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY.

3. CONCRETE QUALITY IN ACCORDANCE WITH THE REQUIREMENTS OF THESE DRAWINGS AND SPECIFICATIONS IS ESSENTIAL TO THE STRUCTURAL PERFORMANCE OF THIS BUILDING. CONCRETE THAT IS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS WILL NOT BE ACCEPTED.

4. ALL CONCRETE SHALL BE NORMAL WEIGHT WITH SAND AND GRAVEL AGGREGATE, TYPE I OR TYPE II PORTLAND CEMENT AND HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT THE END OF 28 DAYS:

FOOTINGS	3000 PSI	FILL CONCRETE *	3000 PSI
INTERIOR SLABS ON GRADE	3000 PSI	MUD MATS *	2000 PSI
SIDEWALKS *	4000 PSI	EXTERIOR STAIRS *	4000 PSI
WALLS	3000 PSI	EXTERIOR SLABS *	4000 PSI
PIERS	3000 PSI	OTHER FND. CONCRETE	3000 PSI

* ONLY APPLICABLE IF REQUIRED AND IF THEY ARE WITHIN THE STRUCTURAL SCOPE OF WORK. IF THEY ARE PART OF THE CIVIL SCOPE OF WORK, THEN REFER TO THE CIVIL CONSTRUCTION DOCUMENTS

5. ALL CONCRETE EXPOSED TO THE WEATHER OR POSSIBLE FREEZE/THAW ACTION SHALL BE AIR ENTRAINED PER ACI 318. AIR CONTENT SHALL BE 6 PERCENT (±) 1.5 PERCENT. AIR ENTRAINMENT ADMIXTURE CAN BE USED TO ACHIEVE THE REQUIRED AIR ENTRAINMENT PERCENTAGE.

6. NO CONCRETE SHALL BE CAST BEFORE REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS HAVE BEEN OBTAINED FROM THE ENGINEER OR INDEPENDENT TESTING AGENCY.

7. CONCRETE MUST REACH THE FOLLOWING PERCENTAGES OF ITS 28 DAY COMPRESSIVE STRENGTH BEFORE FORMS OR SHORES MAY BE REMOVED: WALLS AND BEAM SIDES 40 %

8. HORIZONTAL CONSTRUCTION JOINT LOCATIONS OTHER THAN SHOWN ON THE DRAWINGS ARE SUBJECT TO PRIOR APPROVAL OF THE ENGINEER. ALL VERTICAL CONSTRUCTION JOINTS AND STOPS IN SHORED CONCRETE WORK SHALL BE MADE AT MIDSPAN. EXPANSION JOINT AND CONTROL JOINT LOCATIONS ARE MANDATORY, AS SHOWN. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING INTENDED PLACING SEQUENCES AND LOCATIONS OF CONSTRUCTION JOINTS TO THE ENGINEER FOR APPROVAL.

9. CONCRETE WALLS SHALL BE CAST IN PANELS NOT EXCEEDING 60 FEET IN LENGTH.

10. ALL REINFORCING SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.

11. ALL KEYS SHALL BE 2" x 4" (NOMINAL) UNLESS SHOWN OTHERWISE ON DRAWINGS.

12. BUILD ALL CONCRETE MAT FOUNDATIONS, BASE SLABS, WALLS, AND FLOORS TO MINIMIZE THE EFFECTS OF SHRINKAGE BY CASTING ALTERNATE SECTIONS. ADJACENT SECTIONS MAY BE CAST WHEN THE PREVIOUSLY PLACED SECTION HAS CURED FOR 48 HOURS AFTER ITS INITIAL SET. FOR CURING REQUIREMENTS SEE SPECIFICATIONS.

13. SLAB ON GRADE AREAS (EXCLUDING TENANT'S SLAB ON GRADE) MAY BE POURED IN AS LARGE AN AREA AS CAN BE HANDLED PROVIDED THAT SAWCUT JOINTS ARE CUT AS SOON AS THE CONCRETE WILL SUPPORT A MAN'S WEIGHT WITHOUT PERMANENT DEFORMATION AND THE JOINT PROCESS DOES NOT DISLODGE AGGREGATES AND RAVEL JOINT EDGE. FINISHED FLOOR TOLERANCES TO BE MEASURED AS SPECIFIED IN SECTION 4.8 OF ACI 117. ALL FINISHED CONCRETE SLABS ON GRADE SHALL ACHIEVE THE FOLLOWING:

SPECIFIED OVERALL FLATNESS	Ff = 35
SPECIFIED OVERALL LEVELNESS	Fl = 25

14. PROVIDE SLAB ON GRADE (EXCLUDING TENANT'S SLAB ON GRADE) CONTROL JOINTS AT COLUMN CENTERLINES AND AT INTERVALS OF NOT MORE THAN 15 FEET EACH WAY OR 24 TO 36 TIMES THE SLAB THICKNESS WHICHEVER IS THE SMALLEST DIMENSION. L-SHAPED PANELS ARE NOT PERMITTED.

15. ALL SLABS SHALL BE WET CURED.

16. FOR CONCRETE FILL AND TOPPINGS, PLACE CONSTRUCTION AND EXPANSION JOINTS AT THE SAME LOCATION AS THE CONSTRUCTION AND EXPANSION JOINTS IN THE SUPPORTING CONCRETE.

17. FLOOR SLOPES (SEE TENANT DRAWINGS) WILL BE AN INTEGRAL PART OF SLABS. SEPARATE CONCRETE FILL IS NOT PERMITTED UNLESS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATIONS UNTIL THE INTENDED POUR IS COMPLETED.

18. PROVIDE SEALANT JOINTS FOR ALL EXPOSED TO VIEW CONSTRUCTION JOINTS, CONTROL JOINTS AND SHEAR KEYS.

19. PIPES OR CONDUITS PLACED IN SLABS ON GRADE SHALL NOT BE PLACED CLOSER THAN 3 DIAMETER ON CENTER AND SHALL HAVE AN OUTSIDE DIAMETER LESS THAN 1/3 OF THE SLAB THICKNESS AND BE POSITIONED SO THAT THEY DO NOT INTERFERE WITH SLAB REINFORCEMENTS. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE.

20. NOT ALL OPENINGS (SLEEVES, OUTLET BOXES, BOX-OUTS, ANCHORS, ETC.) THROUGH CONCRETE SLABS AND WALLS ARE SHOWN ON STRUCTURAL DRAWINGS. OPENINGS INDICATED, OR ANY ADDITIONAL OPENINGS OR INSERTS REQUIRED, SHALL BE VERIFIED WITH RESPECTIVE TRADES AND ANY BOX-OUTS NOT COVERED BY TYPICAL DETAILS IN THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BEFORE POURING OF CONCRETE.

21. FOR FINISHES, DEPRESSIONS, REGLETS, NOTCHES, DOOR AND WINDOW OPENINGS, DRIPS, WASHES, AND OTHER ARCHITECTURAL FEATURES AS WELL AS MISC. EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, MASONRY ANCHORS, ETC., SEE ARCHITECTURAL AND TENANT DRAWINGS. WHERE FINISHES ARE NOT SPECIFIED, THEN CONFORM TO THE REQUIREMENTS OF ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

22. IF SAWCUTTING OF EXISTING CONCRETE IS REQUIRED, INCLUDING SLAB ON GRADE, THEN NO OVERCUT AT CORNERS IS ALLOWED. ALL CORNERS SHALL HAVE A CORED HOLE OF SUFFICIENT DIAMETER MADE PRIOR TO CUTTING ADJACENT SIDES TO PREVENT OVERCUTTING BEYOND THE REQUIRED DIMENSION.

23. ALL CONCRETE REINFORCING BARS LESS THAN NO. 11 SHALL CONFORM TO ASTM A615, GRADE 60 (60,000 PSI YIELD STRENGTH). ALL CONCRETE REINFORCING BARS GREATER THAN NO. 11 SHALL CONFORM TO ASTM A615, GRADE 75 (75,000 PSI YIELD STRENGTH). ALL WELDABLE REINFORCING BARS SHALL CONFORM TO A706. REINFORCING BARS SHALL NOT BE WELDED WITHOUT PRIOR APPROVAL BY THE ENGINEER.

24. WELDED WIRE FABRIC (W.W.F.) (AKA: WELDED WIRE MESH (W.W.M.) AND OR WELDED WIRE REINFORCING (W.W.R.)) SHALL CONFORM TO ASTM A1064 (70,000 PSI YIELD STRENGTH); LAP TWO SQUARES AT ALL SPLICES AND TIE AT 3 FOOT CENTERS.

25. DETAILING OF REINFORCEMENT SHALL BE ACCORDING TO THE LATEST EDITION OF ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".

26. PROVIDE BAR SUPPORTS, SPACERS AND ACCESSORIES RECOMMENDED IN THE LATEST ADDITION OF THE ACI DETAILING MANUAL, PUBLICATION SP-66. ALL REINFORCEMENT DETAILING, LAP SPLICES AND EMBEDMENT SHALL CONFORM TO THIS MANUAL. ALL ACCESSORIES, SUCH AS SLAB BOLSTERS AND BEAM AND SLAB CHAIRS IN CONTACT WITH EXPOSED SURFACES SHALL BE ZINC COATED OR PLASTIC TYPE.

27. PROVIDE AND SCHEDULE WITH THE SHOP DRAWINGS ALL NECESSARY ACCESSORIES TO HOLD THE REINFORCING SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE:

HIGH CHAIR	4'-0" ON CENTER
SLAB BOLSTERS	4'-0" ON CENTER
SUPPORT BARS FOR HIGH CHAIRS	NO. 5 BAR

28. SET AND TIE ALL REINFORCEMENT BEFORE PLACING CONCRETE. SETTING DOWELS AND REINFORCEMENT INTO WET CONCRETE IS PROHIBITED.

29. CONCRETE PROTECTION FOR REINFORCEMENT INCLUDING W.W.F. SHALL CONFORM TO THE FOLLOWING CONCRETE COVER, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

A. SURFACES PLACED IN CONTACT WITH THE GROUND	3 INCHES
B. FORMED SURFACE EXPOSED TO EARTH OR WEATHER	
NO. 6 BAR THROUGH NO. 18 BAR	2 INCHES
NO. 5 BAR AND SMALLER	1 1/2 INCHES
C. FORMED SURFACE NOT EXPOSED TO EARTH OR WEATHER	
SLABS, WALLS AND JOISTS	
NO. 11 BAR AND SMALLER	3/4 OF AN INCH
NO. 14 AND NO. 18 BAR	1 1/2 INCHES
BEAMS AND COLUMNS	
PRIMARY REINF., TIES, STIRRUPS AND SPIRALS	1 1/2 INCHES
D. SLAB ON GRADE (FROM TOP OF SLAB)	3/4 OF AN INCH

FOUNDATION NOTES:

1. THE NEW FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT.

GEOTECHNICAL REPORT - AMERICAN ENGINEERING TESTING
550 CLEVELAND AVENUE NORTH, ST. PAUL, MINNESOTA 55114,
PROJECT NO. P-0017579, DATED JANUARY 9, 2023.

CONTRACTORS SHALL REFER TO THIS DOCUMENT FOR GEOTECHNICAL INFORMATION. THE BUILDING PAD MUST BE PREPARED AS RECOMMENDED PER GEOTECHNICAL REPORT, FOR THE BUILDING TO PERFORM AS INTENDED AND AS DESIGNED.

2. REFER TO THE FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS, HOWEVER, TO REACH COMPETENT BEARING SOIL, THE TOP OF FOOTING ELEVATIONS MAY CHANGE; THEREFORE, ALL BEARING MATERIALS SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL DETERMINE THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.

3. BOTTOM OF ALL EXTERIOR FOOTINGS OF A HEATED BUILDING SHALL BEAR A MINIMUM OF 42 INCHES FROM FINISHED GRADE OR THE LOWEST TOP OF SLAB ELEVATION. FOR UNHEATED BUILDING SPACE, BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR A MINIMUM OF 60 INCHES BELOW EXTERIOR GRADE.

4. ACCORDING TO GEOTECHNICAL REPORT, FILL AND BURIED SWAMP DEPOSITS WERE ENCOUNTERED AT THE SITE TO DEPTHS UP TO 23 FEET OR POSSIBLY GREATER BASED ON THE GEOTECHNICAL EXPLORATION OF THE SITE TO DATE. THESE SOILS ARE NOT SUITABLE FOR SUPPORT OF THE BUILDING. **BOTH THE BUILDING PAD AND EXTERIOR SITE STRUCTURES WILL REQUIRE A GROUND IMPROVEMENT SYSTEM SUCH AS RIGID INCLUSIONS. RIGID INCLUSIONS ARE VERTICAL GROUND IMPROVEMENTS MADE USING A DISPLACEMENT DRILLING TOOL. IT IS A PROPRIETARY SYSTEM TO BE DESIGNED BY A SPECIALTY DESIGN-BUILD CONTRACTOR.**

4.1 FILL PLACEMENT AND COMPACTION

A NET FILL EMBANKMENT THICKNESS OF APPROXIMATELY 4 TO 5 FEET WILL BE REQUIRED TO ATTAIN FINISHED GRADE OF THE BUILDING. THE RIGID INCLUSION DESIGN SHOULD ACCOUNT FOR THIS FILL EMBANKMENT. THE NON-ORGANIC SANDY FILL ONSITE WOULD BE SUITABLE FOR REUSE AS FILL IF THEY ARE NOT MIXED WITH ORGANIC SOILS OR DEBRIS. IT IS RECOMMEND THAT IMPORTED FILL CONSISTS OF A GRANULAR SOIL WITH LESS THAN 12% PASSING THE NO. 200 SIEVE, SUCH A MN/DOT 3149.2B2 HAVING NO GRAVEL LARGER THAN 3 INCHES. IF THE CONTRACTOR PROPOSES ANOTHER TYPE OF FILL, A SAMPLE SHOULD BE SUBMITTED TO THE AET GEOTECHNICAL ENGINEER FOR REVIEW.

FILL PLACED TO ATTAIN GRADE FOR IN THE BUILDING PAD SHOULD BE COMPACTED IN THIN LIFTS (8 INCHES IN THICKNESS OR LESS), SUCH THAT THE ENTIRE LIFT ACHIEVES A MINIMUM COMPACTION LEVEL OF 98% OF THE STANDARD MAXIMUM DRY UNIT WEIGHT PER ASTM: D698 (STANDARD PROCTOR TEST). THE FILL SHOULD BE PLACED AT A MOISTURE CONTENT OF -2% TO +3 PERCENT OF OPTIMUM MOISTURE AS DEFINED BY THE STANDARD PROCTOR TEST, IT IS LIKELY THAT SOME MOISTURE CONDITIONING WILL NEED TO BE PERFORMED DURING SITE GRADING FOR RE-USE OF THE ON-SITE FILLS.

THE NON-ORGANIC SANDY FILL ONSITE WOULD BE SUITABLE FOR REUSE AS ENGINEERED FILL IF THEY ARE NOT MIXED WITH ORGANIC SOILS OR DEBRIS. IT IS RECOMMENDED THAT IMPORTED FILL CONSISTS OF A GRANULAR SOIL WITH LESS THAN 12% (BY WEIGHT) PASSING THE NO. 200 SIEVE, SUCH A MN/DOT 3149.2B2 HAVING NO GRAVEL LARGER THAN 3 INCHES.

FILL PLACED TO ATTAIN GRADE IN THE BUILDING AREA SHOULD BE COMPACTED IN THIN LIFTS, SUCH THAT THE ENTIRE LIFT ACHIEVES A MINIMUM COMPACTION LEVEL OF 95% OF THE STANDARD MAXIMUM DRY UNIT WEIGHT PER ASTM: D698 (STANDARD PROCTOR TEST). FROZEN SOILS SHOULD NOT BE USED AS FILL, AND FILL SHOULD NOT BE PLACED ON FROZEN SOILS.

REUSE OF EXISTING FILL ON SITE OR DISPOSAL OFF SITE SHOULD FOLLOW MINNESOTA POLLUTION CONTROL AGENCY (MPCA) GUIDELINES. FILL CONTAINS DEBRIS IS CONSIDERED REGULATED BY MPCA.

4.2 FOUNDATION DESIGN

THE ACTUAL BEARING PRESSURE USED FOR FOOTING DESIGN WILL BE BASED ON THE METHOD OF GROUND IMPROVEMENT USED AND THE SPECIALTY CONTRACTOR'S DESIGN. FINAL DEPTH AND LAYOUT OF THE RIGID INCLUSIONS IS THE RESPONSIBILITY OF THE SPECIALTY DESIGN-BUILD CONTRACTOR, INCLUDING DETERMINING THE REQUIRED LOAD CARRYING CAPACITIES AND SETTLEMENTS. WE UNDERSTAND THAT THE RIGID INCLUSION SYSTEM IS TO BE DESIGNED USING NET MAXIMUM ALLOWABLE SOIL BEARING PRESSURES OF 6,000 POUNDS PER SQUARE FOOT.

4.3 FLOOR SLAB

THE SPECIALTY CONTRACTOR SHOULD PROVIDE A DESIGN MODULUS OF SUBGRADE REACTION (K-VALUES) TO USE IN THE FLOOR SLAB DESIGN. IN OUR OPINION, THE FLOOR SLAB BASE SHOULD CONSIST OF CLASS 5 AGGREGATE BASE (MEETING MNDOT SPECIFICATION 3138) FOR CONSTRUCTABILITY AND SUPPORT AT SLAB JOINTS.

4.4 EXTERIOR BUILDING BACKFILLING

EXTERIOR FOUNDATION BACKFILL SHOULD BE COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY PER THE STANDARD PROCTOR TEST. THE MINIMUM COMPACTION LEVEL SHOULD BE INCREASED TO 100% IN THE UPPER 3 FEET OF THE SUBGRADE WHERE PAVEMENTS ABUT THE FOUNDATION.

EXCAVATION FOR FOOTINGS AND EXPOSED SUBGRADE SHALL BE INSPECTED BY A QUALIFIED INDEPENDENT TESTING AGENCY OR GEOTECHNICAL ENGINEER TO ENSURE ADEQUACY OF THE SUBGRADE SOILS.

ALL PLACEMENT OF STRUCTURAL BACKFILL SHALL BE INSPECTED AND CERTIFIED AS TO ITS ADEQUACY PER STATE BUILDING CODES. FOR APPLICABLE BUILDING CODES, REFER TO THE DESIGN CRITERIA NOTES.

4. ALL EMBANKMENTS AND BACKFILL OUTSIDE OF BUILDING FOOTPRINT IN AREAS OF NON-LOAD SUPPORT MAY BE "ORDINARY FILL". ORDINARY FILL SHALL CONSIST OF GRANULAR SOIL CONTAINING NO DECAYABLE MATTER (ROOTS, WOOD, ORGANIC SOIL, ETC.) ORDINARY FILL SHALL BE PLACED IN LAYERS AND COMPACTED TO AT LEAST 95% PERCENT MODIFIED PROCTOR DENSITY PER ASTM D1557, UNLESS OTHERWISE INDICATED OR SPECIFIED IN THE GEOTECHNICAL REPORT.

5. ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY THE SOIL INSPECTOR OR INDEPENDENT TESTING AGENCY BEFORE ANY CONCRETE IS PLACED. CARE MUST BE TAKEN TO AVOID PENETRATION BELOW GROUND WATER. THE PIER EXCAVATIONS SHOULD BE DRY AND FREE OF ALL LOOSE SOILS AND DELETERIOUS MATERIALS PRIOR TO PLACEMENT OF CONCRETE. CONCRETE SHOULD BE PLACED WITHIN 4 HOURS OF PIER SHAFT EXCAVATION. CONCRETE SHOULD BE PLACED IMMEDIATELY AFTER CONSTRUCTION OF THE UNDERREAM.

6. FOUNDATIONS SHALL NOT BE POURED IN WATER OR ON FROZEN GROUND.

7. ALL FOOTING EXCAVATIONS ARE TO BE FINISHED BY HAND.

8. ALL FOUNDATION UNITS (PIERS AND PILASTERS) SHALL BE CENTERED ON SUPPORT MEMBERS (FOOTINGS), UNLESS OTHERWISE NOTED ON PLANS.

9. DOWELS FROM FOUNDATIONS INTO PIERS OR WALLS SHALL BE THE SAME SIZE AND NUMBER AS REINFORCEMENT IN PIERS OR WALLS ABOVE, UNLESS OTHERWISE NOTED ON PLANS.

10. ALL BACKFILL UNDER SLABS AND FOOTINGS SHALL BE IMPORTED STRUCTURAL BACKFILL COMPACTED TO AT LEAST 95 PERCENT MODIFIED PROCTOR DENSITY PER ASTM D1557 WITH GRADATION LIMITS (SEE FOUNDATION NOTE 4 AND SUBGRADE NOTES) UNLESS OTHERWISE INDICATED OR SPECIFIED IN THE GEOTECHNICAL REPORT.

11. WHERE FOUNDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL.

12. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE.

13. FOR BACKFILLING UNDER OR ADJACENT TO ANY PORTION OF THE BUILDING, SEE FOUNDATION NOTES 3 AND SUBGRADE NOTES.

14. PROVIDE SHEETING, BRACING, AND UNDERPINNING AS REQUIRED TO PRESERVE ADJACENT STRUCTURES.

15. CONTRACTOR SHALL PROVIDE CONTINUOUS DRAINAGE BY MECHANICAL METHODS TO CONTROL SURFACE AND UNDERGROUND WATER, AS REQUIRED DURING CONSTRUCTION. SEE FOUNDATION NOTE 4 FOR SUBGRADE MAINTENANCE AND PROTECTION REQUIREMENT.

16. CONTRACTOR SHALL ENSURE THAT GROUND WATER LEVELS UNDER ADJACENT STRUCTURES AND PROPERTIES ARE NOT ALTERED.

17. PROTECT IN-PLACE FOUNDATIONS, SLABS AND ADJACENT STRUCTURES, NEW CONSTRUCTION, STREET UTILITIES FROM FROST PENETRATION OR DAMAGE FROM CONSTRUCTION ACTIVITIES UNTIL THE PROJECT IS COMPLETED.

18. COORDINATE UNDER FLOOR AND PERIMETER DRAIN REQUIREMENTS WITH ARCHITECTURAL, CIVIL, PLUMBING, AND TENANT DRAWINGS AND THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.

19. VERIFY LOCATIONS AND REQUIREMENTS FOR INSERTS, SLEEVES, CONDUITS, EMBEDMENTS AND PENETRATIONS WITH RESPECTIVE TRADES BEFORE PLACING CONCRETE.

GENERAL NOTES:

1. STRUCTURAL WORK SHALL CONFORM TO THE REQUIREMENTS OF STATE BUILDING CODES. FOR APPLICABLE BUILDING CODES, REFER TO THE DESIGN CRITERIA NOTES.

2. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL PARTS OF THE WORK, INCLUDING DESCRIPTION OF DEMOLITION, AND CONSTRUCTION METHODS AND SEQUENCING WHERE APPLICABLE. NO PERFORMANCE OF THE WORK INCLUDING, BUT NOT LIMITED TO DEMOLITION OF EXISTING STRUCTURE, OR FABRICATION OR ERECTION OF NEW STRUCTURAL ELEMENTS, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE ARCHITECT AND ENGINEER.

3. THE INTENT OF THE STRUCTURAL DRAWINGS IS TO SHOW THE MAIN STRUCTURAL FEATURES AND DESIGN FOR THE COMPLETED PROJECT. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FLOOR ELEVATIONS, SLOPES, LOCATION OF DEPRESSED FLOOR AREAS, AND FLOOR OPENINGS. THESE ARCHITECTURAL DETAILS AND OTHER COMPONENTS THAT MAY BE NECESSARY TO CONSTRUCT THE PROJECT ARE SHOWN ON THE STRUCTURAL DRAWINGS INCIDENTALLY ONLY, AND NOT COMPLETELY. THEREFORE ALL CONTRACT DRAWINGS AND SPECIFICATIONS SHALL BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS DURING ALL PHASES OF CONSTRUCTION.

4. CONTRACTOR SHALL PROVIDE ALL OPENINGS FOR OTHER DISCIPLINES (ie. ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL) AND SHALL REFER TO THEIR DRAWINGS FOR VERIFICATION OF LOCATIONS AND DIMENSIONS OF ALL CHASES, SLOTS, INSERTS, CURBS, OPENINGS, SLEEVES, ANGLE FRAMES AND ALL OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ALL DISCREPANCIES BETWEEN STRUCTURAL DRAWINGS AND OTHER TRADES' DRAWINGS PRIOR TO CONSTRUCTION. IF THE DISCREPANCIES ARE NOT CLARIFIED IN THE ADDENDA AT THE REQUEST OF THE CONTRACTOR, THEN THEY SHALL BE BROUGHT TO THE ATTENTION TO THE ARCHITECT AND ENGINEER DURING CONSTRUCTION FOR CLARIFICATIONS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION IN HIS BID.

6. CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES, PROPERTY, CONSTRUCTION CREW AND THE PUBLIC. TO PRESERVE THESE ADJACENT STRUCTURES AND PROPERTY FROM LATERAL AND VERTICAL DIFFERENTIAL SETTLEMENTS AND TO PROTECT THE PUBLIC, CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY SHORING, BRACING, NEEDLING, UNDERPINNING, OR SHEET PILING AND SHALL IMPLEMENT OSHA SAFETY REQUIREMENTS FOR ALL PHASES OF CONSTRUCTION.

7. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD NEW STRUCTURE FOR WIND AND CONSTRUCTION LOADS. IN ACCORDANCE WITH SECTION 7.10 OF THE LATEST AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES, A STEEL FRAME IS A NON-SUPPORTING FRAME SINCE IT RELIES ON THE INTERACTION BETWEEN THE LATERAL-LOAD-RESISTING SYSTEM (SHEAR WALLS, MOMENT FRAMES, AND OR VERTICAL BRACE FRAMES) AND CONNECTING DIAPHRAGM (METAL DECK, WOOD DECK, CONCRETE SLAB, ETC.) FOR STABILITY. THE TEMPORARY SUPPORTS SHALL REMAIN UNTIL ALL ELEMENTS REQUIRED FOR STABILITY OF THE STEEL FRAME ARE COMPLETED. THE DESIGN OF THESE TEMPORARY SUPPORTS SHALL BE BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED IN THE EMPLOY OF THE CONTRACTOR. THIS REQUIREMENT IS NOT LIMITED TO JUST STEEL FRAMES BUT SHALL BE APPLICABLE TO ALL FRAMES (i.e. CONCRETE, METAL STUD AND WOOD).

8. WORK NOT INDICATED ON A PART OF THE STRUCTURAL DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATION, SHALL BE INCLUDED IN THE CONTRACTOR'S WORK.

9. DETAILS SHOWN AS TYPICAL ARE APPLICABLE TO ALL SIMILAR CONDITIONS.

10. ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS CAREFULLY, VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.

11. PRIOR TO COMMENCEMENT OF WORK, DEVELOPMENT OF SHOP DRAWINGS AND OR FABRICATION OF COMPONENTS, CONTRACTOR SHALL INVESTIGATE AND VERIFY IN THE FIELD ALL CONDITIONS, DIMENSIONS, AND ELEVATIONS OF THE EXISTING CONSTRUCTION. ALL DISCREPANCIES BETWEEN FIELD-VERIFIED CONDITIONS, DIMENSIONS AND ELEVATIONS AND THOSE INDICATED ON THE DRAWINGS SHALL BE IMMEDIATELY MADE KNOWN TO THE ARCHITECT AND ENGINEER IN WRITING. THE USE OF (V.I.F.) OR (+/-) OR OTHER SIMILAR NOTES AT CERTAIN LOCATIONS ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR VERIFYING ALL CONDITIONS DESCRIBED ABOVE. CONTRACTOR SHALL COORDINATE THEIR FIELD MEASUREMENTS AND FINDINGS WITH THE NEW WORK.

12. INFORMATION REGARDING EXISTING CONSTRUCTION OR CONDITIONS MAY BE BASED ON AVAILABLE RECORD DRAWINGS WHICH MAY OR MAY NOT TRULY REFLECT EXISTING CONDITIONS. SUCH INFORMATION IS INCLUDED ON THE ASSUMPTION THAT IT MAY BE OF INTEREST TO THE CONTRACTOR, BUT THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY OR COMPLETENESS.

13. ALL CONTRACTORS SHALL NOT "SCALE" DRAWINGS TO OBTAIN ANY MISSING INFORMATION OR TO INTERPRET ANY INFORMATION NOT SPECIFICALLY DIMENSIONED SINCE SOME DETAILS MAY NOT BE DRAWN TO SCALE FOR CLARIFICATION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER FOR MISSING DIMENSIONS.

SPECIAL INSPECTION NOTES:

1. SPECIAL INSPECTIONS SHALL COMPLY WITH TO THE REQUIREMENTS OF STATE BUILDING CODES. FOR APPLICABLE BUILDING CODES, REFER TO THE DESIGN CRITERIA NOTES.

2. REFER TO DRAWING S003 FOR SPECIAL INSPECTION REQUIREMENTS.

3. IF THERE ARE DISCREPANCIES BETWEEN DRAWING S003 AND THE REQUIREMENTS OF STATE BUILDING CODES, THEN THE STATE BUILDING CODES GOVERNS.

4. SPECIAL INSPECTION AGENCY SHALL REVIEW CONSTRUCTION PER DRAWING S003 & THE STATE BUILDING CODES.

5. SPECIAL INSPECTION AGENCY SHALL NOTIFY THE ARCHITECT/ENGINEER OF ERRORS, OMISSIONS, CHANGES, ETC. IMMEDIATELY (PRIOR TO AN OFFICIAL SPECIAL INSPECTION REPORT) SO THAT THE ARCHITECT/ENGINEER CAN ADDRESS THESE PROBLEMS PROMPTLY AND TO KEEP THE CONSTRUCTION SCHEDULE ON TRACK.

6. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT THE OFFICIAL WRITTEN SPECIAL INSPECTION REPORTS TO THE ARCHITECT/ENGINEER REGULARLY.

SLAB SUBGRADE NOTES:

PER GEOTECHNICAL REPORT, FOR NEW FLOOR SLAB ON GRADE, THE SUBGRADE AND FILL MATERIALS SHALL BE PREPARED AS FOLLOWS:

1. THE SLAB-ON-GRADE PREPARATION - SEE FOUNDATION NOTE 4.

2. INSTALL A VAPOR BARRIER OVER THE COMPACTED BASE COURSE. SEE FOUNDATION PLAN FOR THICKNESS. VAPOR BARRIER SHALL BE A STEGO WRAP VAPOR BARRIER BY STEGO INDUSTRIES. MINIMUM VAPOR TRANSMISSION RATE OF 0.3 PERMS OR LOWER PER ASTM E 96. SEAMS SHALL BE SEALED IN ACCORDANCE WITH THE MANUF.'S RECOMMENDATIONS.

DESIGN CRITERIA NOTES

THIS NEW STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2020 MINNESOTA BUILDING CODE (2018 IBC WITH STATE AMENDMENTS).

FLOOR SLAB-ON-GRADE:

LIVE LOAD	
RETAIL AREA	= 100 PSF
STORAGE (EQUIPMENT ROOM)	= 125 PSF
DEAD LOAD	
6" CONCRETE SLAB - SELF WEIGHT	= 75 PSF
5" CONCRETE SLAB - SELF WEIGHT	= 62.5 PSF

ROOF:

SNOW LOAD:	
RISK CATEGORY	= II
IMPORTANCE FACTOR (Is)	= 1.0
GROUND SNOW LOAD (Pg)	= 50 PSF
SNOW EXPOSURE FACTOR (Ce)	= 1.0
THERMAL FACTOR (Ct)	= 1.0
FLAT ROOF SNOW LOAD, (Pf)	= 35.0 PSF + DRIFT
ROOF LIVE LOAD (DOES NOT GOVERN)	= 20 PSF
DEAD LOADS:	
ROOFING MEMBRANE & INSULATION	= 4.0 PSF
1 1/2" METAL ROOF	= 2.5 PSF
STEEL ROOF BEAMS	= 6.0 PSF
SPRINKLERS	= 2.0 PSF
MECH., ELEC., & PLUMB.	= 3.0 PSF
CEILING	= 2.0 PSF
MISC.	= 0.5 PSF
TOTAL DEAD LOAD (FLAT)	= 20.0 PSF

PAY STATION & VACUUM CANOPIES:

DEAD LOAD	
FABRIC	= 1 PSF
ROOF LIVE LOAD	= 5 PSF

WIND LOADS:

RISK CATEGORY	= II
EXPOSURE	= C
BASIC WIND SPEED (Vult)	= 109 MPH
BASIC WIND SPEED (Vasd)	= 84.4 MPH

WIND PRES

5.2D - PLAN SET

LIGHT GAGE FRAME (IBC 1705.2.4, 1705.11.2, 1705.11.3, 1705.12.3 & 1705.12.9)

ITEM	FREQUENCIES				DETAIL DESCRIPTION
STUD WALL, RAFTER AND JOIST CONSTRUCTION AT CANOPIES		CONTINUOUS	X	PERIODIC	VERIFY THAT PROPER SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING HAS OCCURRED AND INSTALLATION CONFORMS TO APPROVED SHOP DRAWINGS.
TRUSSES SPANNING GREATER THAN AND EQUAL TO 60-FEET		CONTINUOUS	X	PERIODIC	VERIFY THAT TEMPORARY AND PERMANENT TRUSS RESTRAINT/BRACING IS INSTALLED IN ACCORDANCE WITH APPROVED TRUSS SUBMITTAL PACKAGE. PERFORMED BY CODE INSPECTION FIRM.
WIND-FORCE-RESISTING SYSTEMS OR SEISMIC-FORCE-RESISTING SYSTEMS OF STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F.- WELDING		CONTINUOUS	X	PERIODIC	WELDING OPERATIONS OF THE ELEMENTS OF THE MAIN WIND FORCE RESISTING SYSTEM.
WIND-FORCE-RESISTING SYSTEMS OR SEISMIC-FORCE-RESISTING SYSTEMS OF STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F.- FASTENERS		CONTINUOUS	X	PERIODIC	APPLICABLE WHEN FASTENERS ARE SPACED LESS THAN 4" O.C. FOR SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE MAIN WIND FORCE RESISTING SYSTEM INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG STRUTS) AND HOLD-DOWNS. PERFORMED BY CODE INSPECTION FIRM.
WIND-FORCE-RESISTING SYSTEMS OR SEISMIC-FORCE-RESISTING SYSTEMS COMPONENTS.		CONTINUOUS	X	PERIODIC	WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRGAMS AND FRAMING.
COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES		CONTINUOUS	X	PERIODIC	INSTALLATION OF COLD-FORMED STEEL BOLTED MOMENT FRAMES IN THE SEISMIC-FORCE-RESISTING SYSTEMS OF STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E, OR F.

MASONRY CONSTRUCTION (IBC 1705.4 & 1705.4.2)

ITEM	FREQUENCIES				DETAIL DESCRIPTION
SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402/ACI 530/ASCE 5 AND TMS 602/ACI 530.1/ASCE 6.					
MINIMUM QUALITY ASSURANCE PROGRAM FOR MASONRY IN RISK CATEGORY I, II, OR III STRUCTURES					
PRIOR TO CONSTRUCTION					VERIFY CERTIFICATES OF COMPLIANCE USED IN MASONRY CONSTRUCTION.
MINIMUM TESTS					VERIFY SLUMP FLOW AND VISUAL STABILITY INDEX AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH GROUT MIX SPECIFICATION. COMPRESSIVE STRENGTH TESTS PERFORMED IN ACCORDANCE WITH ASTM C 1019, AND SLUMP FLOW AND VISUAL STABILITY INDEX AS DETERMINED BY ASTM C 1611 (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 1.5 B.1.b.3) FOR SELF-CONSOLIDATING GROUT. VERIFY f'm AND f 'AAC IN ACCORDANCE WITH THE COMPRESSIVE STRENGTH DETERMINATION SPECIFICATION (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 1.4 B) PRIOR TO CONSTRUCTION.
VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		CONTINUOUS	X	PERIODIC	OBTAIN WRITTEN ACCEPTANCE OF SUBMITTALS PRIOR TO THE USE OF THE MATERIALS AND METHODS (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 1.5) MORTAR (EXCLUDING THIN-BED MORTAR FOR AAC): MIX DESIGNS INDICATING TYPE AND PROPORTIONS OF INGREDIENTS IN COMPLIANCE WITH PROPORTION SPECIFICATION OF ASTM C270 AND MORTAR TEST PERFORMED IN ACCORDANCE WITH THE PROPERTY SPECIFICATION OF ASTM C270 GROUT: MIX DESIGNS INDICATING TYPE AND PROPORTIONS OF THE INGREDIENTS ACCORDING TO THE PROPORTION REQUIREMENTS OF ASTM C476 AND COMPRESSIVE STRENGTH TESTS PERFORMED IN ACCORDANCE WITH ASTM C1019, AND SLUMP FLOW AND VISUAL STABILITY INDEX AS DETERMINED BY ASTM C1611. MATERIAL CERTIFICATES: MATERIAL CERTIFICATES FOR REINFORCEMENT, ANCHORS, TIES, FASTENERS, AND METAL ACCESSORIES, MASONRY UNITS, MORTAR, THIN-BED MORTAR FOR AAC, GROUT MATERIALS, AND SELF-CONSOLIDATING GROUT. CONSTRUCTION PROCEDURES: FOR COLD AND HOT WEATHER CONSTRUCTION PROCEDURES.
AS MASONRY CONSTRUCTION BEGINS:					
PROPORTIONS OF SITE-PREPARED MORTAR		CONTINUOUS	X	PERIODIC	PROVIDE MORTAR OF THE TYPE AND COLOR SPECIFIED AND CONFORMING WITH ASTM C270 (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 2.1) MORTAR MIXTURE (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 2.6 A): MIX CEMENTITIOUS MATERIALS AND AGGREGATES BETWEEN 3 AND 5 MINUTES IN A MECHANICAL BATCH MIXER WITH SUFFICIENT WATER TO PRODUCE A WORKABLE CONSISTENCY. MAINTAIN WORKABILITY OF MORTAR BY REMIXING OR RETEMPERING. DISCARD MORTAR WHEN IT HAS BEGUN TO STIFFEN OR IS NOT USED WITHIN 2½ HOURS AFTER INITIAL MIXING. NO ADMIXTURES CONTAINING > 0.2% CHLORIDE-IONS SHALL BE USED. DO NOT ADD MINERAL OXIDE OR CARBON BLACK PIGMENT WITHOUT THE APPROVAL OF THE ARCHITECT/ENGINEER
PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		CONTINUOUS	X	PERIODIC	PLACING MORTAR AND UNITS (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.3 B): UNLESS SPECIFIED OTHERWISE CONSTRUCT 3/8" BED AND HEAD JOINTS, EXCEPT AT FOUNDATION, BED JOINT AT FOUNDATION SHALL BE +1/4" AND ± 3/4". FILL HOLES NOT SPECIFIED IN EXPOSED AND BELOW GRADE MASONRY WITH MORTAR. TOOL JOINTS WITH A ROUND JOINTER WHEN MORTAR IS THUMBPRINT HARD. REMOVE MASONRY PROTRUSIONS EXTENDING ≥ 1/2" INTO CELLS TO BE GROUTED. SOLIDLY FILL COLLAR JOINTS < 3/4" WITH MORTAR DURING CONSTRUCTION. FOR MORTAR PLACEMENT ON HOLLOW UNITS, SOLID UNITS AND OPEN-ENDED UNITS WITH BEVELED ENDS, REFER TO TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.3 B. UNLESS OTHERWISE NOTED ON CONSTRUCTION DOCUMENTS.
GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES		CONTINUOUS	X	PERIODIC	CONFIRM THAT ANCHORAGES AND COUPLERS ARE CAPABLE OF DEVELOPING 95% OF THE SPECIFIED BREAKING STRENGTH OF THE PRESTRESSING TENDONS. REFERENCE FOR CRITERIA: TMS 602/ACI 530.1/ ASCE 6, ARTICLE 2.4 B, 2.4 H
LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS AND ANCHORAGES		CONTINUOUS	X	PERIODIC	VERIFY COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS. REQUIREMENTS ENSURES THAT GALVANIC ACTION IS INHIBITED, LOCATION OF BARS PER DESIGN, CLEARANCE FOR GROUT/MORTAR FOR PROPER LOAD TRANSFER, PREVENT CORRISION, AND COMPATIBLE LATERAL DEFLECTION OF WYTHE IS ACHIEVED, DO NOT PLACE DISSIMILAR METALS IN CONTACT WITH EACH OTHER. REINFORCEMENTS, JOINT REINFORCEMENTS, WALL TIES, VENEER ANCHORS, AND ANCHOR INSTALLATION (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.4) PRESTRESSING TENDON INSTALLATION AND STRESSING PROCEDURE - SITE TOLERANCES (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.6 A)
PRESTRESSING TECHNIQUE		CONTINUOUS	X	PERIODIC	THE PRE-STRESSING FORCE AT EACH TENDON SHALL BE VERIFIED BY TWO METHODS: (1) MEASURING THE STEEL ELONGATION AND (2) THE OBSERVED JACKING FORCE APPLIED TO THE TENDON. THE MEASURED ELONGATION SHOULD BE COMPARED TO THE LOAD-ELONGATION CURVES FOR THE PRE-STRESSING STEEL USED AND NOT MORE THAN A 5% DIFFERENCE SHOULD BE FOUND WHEN COMPARING TO THE ACTUAL FORCE APPLIED. A 7% DIFFERENCE IS ALLOWED FOR POST-TENSIONED TENDONS. WHEN TOTAL LOSS OF PRESTRESS DUE TO UNREPLACED BROKEN PRESTRESSING TENDONS EXCEEDS 2% OF TOTAL PRESTRESS, NOTIFY THE ARCHITECT/ENGINEER. PRESTRESSING TENDON INSTALLATION AND STRESSING PROCEDURE - APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.6 B)
PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X	CONTINUOUS (REQUIRED FOR THE FIRST 5000 SF. OF A...	X	PERIODIC (REQUIRED FOR THE FIRST 5000 SF. OF AAC MASONRY)	MORTAR MATERAIL FOR AAC MASONRY (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 2.1 C)
PRIOR TO GROUTING:					
GROUT SPACE IS CLEAN		CONTINUOUS	X	PERIODIC	VERIFY THAT GROUT SPACE IS FREE OF MORTAR DROPPINGS, DEBRIS, LOOSE AGGREGATE, AND MATERIAL DELETERIOUS TO MASONRY GROUT. PREPARATION - CLEANOUT (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.2 F) PROVIDE CLEANOUTS IN THE BOTTOM COURSE OF MASONRY FOR EACH GROUT POUR WHEN THE GROUT POUR HEIGHT EXCEEDS 5 FT 4 IN. CLEANOUT ARE REQUIRED TO ALLOW THE GROUT SPACE TO BE ADEQUATELY CLEANED PRIOR TO GROUTING AND BE USED TO VERIFY REINFORCEMENT PLACEMENT AND TYING.
GRADE, TYPE AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES		CONTINUOUS	X	PERIODIC	REINFORCEMENT, PRESTRESSING TENDONS, AND METAL ACCESSORIES (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 2.4) TYPE, MATERIAL GRADES, YIELD STRENGTHS, AND COATINGS/FINISHES REINFORCEMENTS, JOINT REINFORCEMENTS, WALL TIES, VENEER ANCHORS, AND ANCHOR INSTALLATION (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.4) DETAILS OF REINFORCEMENT AND METAL ACCESSORIES (TMS 402/ACI 530/ ASCE 5, SEC. 6.1) FOR BAR EMBEDMENT, REINFORCEMENT SIZES, PLACEMENT OF REINFORCEMENT, PROTECTION OF REINFORCEMENT AND METAL ACCESSORIES, AND BAR HOOKS/BENDS)
PLACEMENT OF REINFORCEMENT AN CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES		CONTINUOUS	X	PERIODIC	VERIFY THAT REINFORCEMENT, JOINT REINFORCEMENT, WALL TIES, ANCHOR BOLTS AND VENEER ANCHORS ARE INSTALLED PREPARATION OF REINFORCEMENT (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.2 E). PLACE REINFORCEMENT AND TIES IN GROUT SPACES PRIOR TO GROUTING. LOSS OF BOND AND MISALIGNMENT OF THE REINFORCEMENT CAN OCCUR IF IT IS NOT PLACED PRIOR TO GROUTING. REINFORCEMENTS, JOINT REINFORCEMENTS, WALL TIES, VENEER ANCHORS, AND ANCHOR INSTALLATION (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.4) PRESTRESSING TENDON INSTALLATION AND STRESSING PROCEDURE - SITE TOLERANCES (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.6 A)

LIGHT GAGE METAL FRAMING NOTES (CONT.):

4. APPROVAL OF SHOP DRAWINGS WILL BE FOR SIZE AND ARRANGEMENT OF ITEMS AND STRENGTH OF CONNECTIONS. DIMENSIONS AND CALCULATIONS SHOWN ON THE SHOP DRAWINGS SHALL BE THE RESPONSIBILITY OF THE ERECTOR.

5. OBTAIN ARCHITECT'S APPROVAL OF SHOP DRAWINGS BEFORE PROCEEDING WITH FABRICATION AND ERECTION.

6. ALL LIGHT GAGE MEMBERS SHALL BE MIN. 18 GAGE, UNLESS OTHERWISE NOTED ON PLAN.

7. STRUCTURAL STUDS, JOIST, BRIDGING AND ACCESSORIES SHALL HAVE A MINIMUM YIELD STRENGTH 50,000 PSI FOR 16 GAGE AND THICKER MATERIAL, AND 33,000 PSI FOR MATERIAL THINNER THAN 16 GAGE.

8. ACCEPTABLE STUD MANUFACTURERS INCLUDE, DIETRICH, UNIMAST, OR APPROVED EQUAL.

9. HANDLING AND LIFTING OF PREFABRICATION PANEL SHALL BE DONE IN SUCH A MANNER AS TO NOT CAUSE DISTORTION IN ANY MEMBER. TRACKS SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE, STUDS SHALL BE PLUMBED, ALIGNED, AND SECURELY ATTACHED TO THE FLANGES OR WEB OF BOTH UPPER AND LOWER TRACKS.

10. TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED. WALL STUD BRIDGING SHALL BE INSTALLED IN A MANNER AS TO PREVENT ROTATION AND ALSO IN A MANNER TO PROVIDE RESISTANCE TO BOTH MINOR AXIS BENDING AND ROTATION.

11. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL LIGHT GAGE FRAMING LOCATIONS AND REQUIREMENTS. COORDINATE LOCATIONS AND DESIGN FOR ALL WALL-HUNG EQUIPMENTS.

12. PROVIDE CONNECTIONS, BRACES, BRIDGING AND RUNNER TRACKS (MIN. 14 GAGE, BUT NOT LESS THAN GAGE OF SUPPORTED STUD) TO DEVELOP THE FULL CAPACITY OF THE MEMBERS, PROVIDE CLIPS, CONNECTIONS, AND STRAPPING FOR TEMPORARY LATERAL BRACING AND ALL ITEMS NECESSARY FOR COMPLETE INSTALLATION.

13. STUDS AND ACCESSORIES ARE OF THE TYPE, WALL SIZE AND SPACING AS SHOWN ON THE DRAWINGS AND SHALL BE MANUFACTURED BY DIETRICH INDUSTRIES, INC., OR EQUIVALENT. HEAVIER GAGES MAY BE SUBSTITUTED FOR THOSE SHOWN. STUDS SHALL BE MARKED WITH MANUFACTURER'S NAME, GAGE, SIZE, AND YIELD STRENGTH.

14. STUDS OF 18 GAGE AND LIGHTER, TRACKS AND ACCESSORIES OF 16 GAGE AND LIGHTER SHALL BE ASTM A 570 GRADE A (MINIMUM YIELD STRENGTH 33 KSI). ALL STUDS OF 16 GAGE AND HEAVIER, TRACKS AND ACCESSORIES OF 14 GAGE AND HEAVIER SHALL BE ASTM 446 GRADE D (MINIMUM YIELD STRENGTH 50 KSI). STUDS, TRACK, AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING.

15. STUDS, JOISTS AND TRACKS SHALL BE CONTINUOUS ACROSS THE ENTIRE SPAN.

16. FASTENERS CONNECTING LIGHT GAGE MEMBERS AND ACCESSORIES SHALL BE A MINIMUM OF NO. 10 SIZE WITH A MINIMUM DIAMETER OF 0.190 INCHES. A MINIMUM OF TWO FASTENERS SHALL BE USED AT EACH LOCATION UNLESS NOTED OTHERWISE.

17. FASTENERS CONNECTING LIGHT GAGE MEMBERS TO STRUCTURAL STEEL SHALL BE POWDER ACTUATED FASTENERS (PAF's) OF 0.145 INCH IN DIAMETER MINIMUM. EMBEDMENT SHALL BE 1-1/8 INCHES FOR 0.145 PAF's, WITH EDGE DISTANCES OF 3 INCH MINIMUM AND SPACING OF 4 INCH MINIMUM. FASTENERS CONNECTING FROM LIGHT GAGE MEMBERS TO CONCRETE SHALL BE TAPCON OF 0.25 INCH IN DIAMETER, MINIMUM EMBEDMENT SHALL BE 1-1/4 INCHES WITH EDGE DISTANCES OF 3 INCH MINIMUM AND SPACING OF 4 INCH MINIMUM.

18. FASTENERS CONNECTING TRACKS TO STRUCTURAL STEEL OR CONCRETE SHALL BE SPACED AT 16 INCHES ON CENTER MAXIMUM. FASTENERS OR FASTENER GROUP SHALL BE CENTERED AS CLOSE AS POSSIBLE TO THE WEBS OF THE WALL STUDS OR THE CENTERLINE OF MULTIPLE-STUD JAMBS.

SPECIAL INSPECTION NOTE:

1. THE QUALITY ASSURANCE PROGRAM IS PREPARED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE REQUIREMENTS OF STATE BUILDING CODES. FOR APPLICABLE BUILDING CODES, REFER TO THE DESIGN CRITERIA NOTES ON S001.

2. ANY DISCOVERED DISCREPANCIES OR DEVIATION FROM THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO AN IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTIONS. IF SUCH DISCREPANCIES OR DEVIATIONS ARE NOT CORRECTED, THEN THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, STRUCTURAL ENGINEER OF RECORD AND ARCHITECT OF RECORD.

3. JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

4. MATERIALS AND ACTIVITIES TO BE INSPECTED ARE NOT TO INCLUDE THE CONTRACTOR'S EQUIPMENTS OR METHODS USED TO ERECT OR INSTALL THE MATERIALS LISTED.

5. THE FOLLOWING TABLES OF STRUCTURAL TESTS AND INSPECTIONS ON S002 AND S003 ARE INCLUDED IN THE PROGRAM FOR STRUCTURAL TESTS AND INSPECTIONS FOR THIS PROJECT.

6. THE CONTRACTOR SHALL PROVIDE A QUALITY CONTROL PROGRAM FOR THE CONSTRUCTION REGULATED UNDER THE APPLICABLE BUILDING CODES, QUALITY ASSURANCE, AND ITS IMPLEMENTATION DOES NOT RELIEVE THE CONTRACTOR OF ITS RESPONSIBILITIES FOR QUALITY CONTROL OF THE CONSTRUCTION, FOR COMPLIANCE WITH THE PROJECT CONSTRUCTION DOCUMENTS, NOR FOR ANY DESIGN FOR WHICH IT IS RESPONSIBLE. CONTRACTOR SHALL REFER TO IBC 2021 SECTION 1704.4, CONTRACTOR RESPONSIBILITY.

7. AS FABRICATION AND CONSTRUCTION PROGRESS, INSPECTION REPORTS AND RECORDS OF TESTS AND INSPECTIONS SHALL BE FORWARDED, BY THE APPROPRIATE TESTING AGENCY, TO THE REGISTERED DESIGN PROFESSIONAL (RDP) FOR REVIEW AND APPROVAL. THE ENGINEER SHALL NOTE ANY UNRESOLVED CONSTRUCTION DEFICIENCIES IN WRITING TO THE BUILDING OFFICIAL AND THE ARCHITECT.

8. INSPECTION OF FABRICATORS: WHERE FABRICATION OF STRUCTURAL COMPONENTS OR ASSEMBLIES IS BEING PERFORMED IN AN OFF-SITE FACILITY, THE INSPECTOR SHALL VERIFY THAT FABRICATORS DESIGNATED FOR THE PROJECT MAINTAIN COMPLETE AND SUFFICIENT QUALITY CONTROL PROCEDURES THAT ASSURE THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS.

SPECIAL INSPECTIONS REQUIRED BY IBC 2021 SECTION 1704.2.5.1 ARE NOT REQUIRED WHERE WORK IS DONE ON THE PREMISES OF THE FOLLOWING CERTIFIED FABRICATORS:
1. A FABRICATOR OF STRUCTURAL STEEL THAT IS CERTIFIED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION INC.'S FABRICATOR CERTIFICATION PROGRAM.
2. A FABRICATOR OF PRECAST CONCRETE THAT IS CERTIFIED BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE'S PLANT ERTIFICATION PROGRAM.
THIS WAIVER DOES NOT ELIMINATE STRUCTURAL INSPECTION DURING FABRICATION.

DURING FABRICATION THE AGENT SHALL CONFIRM THAT THE FABRICATOR IS SUITABLY EXECUTING ITS QUALITY CONTROL
PROCEDURES AND PRODUCING A PRODUCT THAT CONFORMS TO THE CONSTRUCTION DOCUMENTS.

9. SPECIAL INSPECTOR SHALL EXAMINE DESIGNATED SEISMIC SYSTEMS REQUIRING SEISMIC QUALIFICATION IN ACCORDANCE WITH SECTION 13.2.2 OF ASCE 7 AND VERIFY THAT THE LABEL, ANCHORAGE AND MOUNTING CONFORM TO THE CERTIFICATE OF COMPLIANCE.

SOILS CONSTRUCTION (IBC 1705.6)

ITEM	FREQUENCIES				DETAIL DESCRIPTION
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO...		CONTINUOUS	X	PERIODIC	PRIOR TO PLACEMENT OF CONCRETE.
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		CONTINUOUS	X	PERIODIC	PRIOR TO PLACEMENT OF COMPACTED FILL OR CONCRETE.
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIAL.		CONTINUOUS	X	PERIODIC	ALL MATERIALS SHALL BE CHECKED AT EACH LIFT FOR PROPER CLASSIFICATIONS AND GRADATIONS NOT LESS THAN ONCE FOR EACH 10,000FT² OF SURFACE...
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	CONTINUOUS		PERIODIC	PRIOR TO PLACEMENT OF COMPACTED FILL.
INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		CONTINUOUS	X	PERIODIC	PRIOR TO PLACEMENT OF COMPACTED FILL.
NOTES: THE APPROVED GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE EOR SHALL BE USED TO DETERMINE COMPLIANCE. DURING FILL PLACEMENT, THE SPECIAL INSPECTOR SHALL VERIFY THAT PROPER MATERIALS AND PROCEDURES ARE USED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT.					

STRUCTURAL STEEL NOTES:

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE "STEEL CONSTRUCTION MANUAL" OF AMERICAN INSTITUTE OF STEEL CONSTRUCTION, FOURTEENTH EDITION (LATEST PUBLICATION).

2. THE STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:

A. STRUCTURAL ROLLED W-SHAPES: ASTM A992.
B. STRUCTURAL C-SHAPES, MC-SHAPES, BARS, PLATES AND ANGLES: ASTM A36
C. HOLLOW STRUCTURAL SECTION (HSS) SQ. & RECT.: ASTM A500, GRADE B
D. STRUCTURAL PIPES: ASTM A53, GRADE B
E. HIGH STRENGTH CONNECTION BOLTS: ASTM A325, TYPE SC OR N.
F. ANCHOR BOLTS: ASTM F-1554 GRADE 36.
G. HEAVY HEX NUTS: ASTM A563
H. HARDEN WASHERS: F436

3. ALL STEEL SHALL BE COATED WITH SHOP GREY PRIMER UNLESS OTHERWISE NOTED.

4. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED. STRUCTURAL BOLTS EXPOSED TO WEATHER SHALL EITHER HOT-DIP GALV. OR SHERARDIZED.

5. ALL SEALED HOLLOWED SECTIONS AND PIPES EXPOSED TO WEATHER SHALL HAVE A VENT HOLE LOCATED AWAY FROM VIEW.

6. DESIGN AND DETAIL OF ALL CONNECTIONS SHALL BE ACCORDING TO AISC, ALLOWABLE STRESS DESIGN METHOD. ALL CONNECTIONS SHALL BE BOLTED WITH HIGH-STRENGTH BOLTS OR WELDED, UNLESS NOTED OTHERWISE.

7. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1, STRUCTURAL WELDING CODE.

8. ALL WELDER, TACKER AND WELDING OPERATOR SHALL BE CERTIFIED BY TEST WITHIN THE PAST SIX MONTHS TO PERFORM THE TYPE OF WORK REQUIRED IN CONFORMANCE WITH THE AWS D1.1, STRUCTURAL WELDING CODE

9. ALL WELDING ELECTRODES WILL BE E70XX.

10. FIELD WELDING OF STRUCTURAL MEMBERS, NOT INDICATED ON THE STRUCTURAL DRAWINGS IS NOT PERMITTED.

11. CUTS, HOLES, COPING, ETC. REQUIRED FOR WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN STRUCTURAL STEEL MEMBERS IN THE FIELD SHALL NOT BE PERMITTED, UNLESS SPECIFICALLY APPROVED IN EACH CASE BY THE ENGINEER.

12. UNLESS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS, ALL SIMPLY SUPPORTED BEAM-TO-COLUMN AND BEAM-TO-BEAM CONNECTIONS SHALL BE DOUBLE ANGLE (5/16" MINIMUM THICKNESS) IN CONFORMANCE WITH THE AISC MANUAL. BOLT HOLES SHALL BE EITHER STANDARD HOLES OR SHORT HORIZONTAL SLOTTED HOLES. MINIMUM OF TWO ROWS OF BOLTS.

13. SHOP CONNECTIONS MAY BE BOLTED OR WELDED, UNLESS THE CONNECTION METHOD IS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.

14. UNLESS OTHERWISE NOTED, ALL WELD SIZES NOT SHOWN IN DETAIL HEREIN SHALL BE THE MINIMUM REQUIRED SIZE BASED ON THICKNESS OF THICKER PART PER AISC, TYPICAL EXCEPT FOR SPLICE CONNECTIONS.

15. ALL SPLICE CONNECTIONS, EITHER WELDED OR BOLTED, SHALL DEVELOP FULL STRENGTH OF THE MEMBER OR COMPONENTS BEING CONNECTED.

16. SPLICING OF STRUCTURAL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

17. CONNECTIONS FOR NON-COMPOSITE BEAMS AND GIRDERS SHALL BE DESIGNED FOR 1/2 THE MAXIMUM UNIFORM LOAD CARRYING CAPACITY OF THE MEMBER.

18. TENSION OR COMPRESSION CONNECTIONS SHALL DEVELOP THE FORCE DUE TO THE DESIGN LOAD, BUT NOT LESS THAN 100 PERCENT OF THE TENSION STRENGTH OF THE MEMBER WHERE NO DESIGN LOAD IS GIVEN. DESIGN FORCES HAVE BEEN FACTORED IN ACCORDANCE WITH THE GOVERNING BUILDING CODE AND NO STRESS INCREASE IS PERMITTED WHEN DESIGN FORCE IS BASED ON TENSION CAPACITY ON MEMBER, LOAD IS TO BE APPLIED AS A TENSION OR COMPRESSION FORCE.

19. ANY ALTERATIONS MADE BY THE DETAILER ON THE STRUCTURAL STEEL SHOP DRAWINGS TO SCHEMATIC OR COMPLETELY DETAILED CONNECTIONS SHOWN ON THE CONTRACT DRAWINGS MUST BE CLEARLY IDENTIFIED BY CLOUDING OR BY DIRECT NOTE ON THE SHOP DRAWING BY THE DETAILER PRIOR TO SUBMISSION TO THE ENGINEER.

20. ANY MEMBER SIZES SHOWN ON THE PLANS AND CURRENTLY LISTED IN THE AISC MANUAL, WHICH ARE NOT CURRENTLY AVAILABLE MUST BE BROUGHT TO THE ARCHITECT AND ENGINEER ATTENTION PRIOR TO AWARD OF THE STEEL CONTRACT. NO CLAIM FOR ADDITIONAL COST WILL BE ACCEPTED AFTER THE AWARD, FOR MEMBER/BUILT UP MEMBER SUBSTITUTIONS FOR THESE SIZES.

21. THE CONTRACTOR SHALL SUPPLY ALL PLATES, CLIPS, SEAT ANGLES, CONNECTIONS ETC., AS REQUIRED FOR COMPLETION OF THE STRUCTURE, EVEN IF SUCH ITEMS ARE NOT EXPLICITLY CALLED FOR ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.

22. THE CONTRACTOR SHALL PROVIDE ALL EMBEDDED PLATES, SLEEVES, BOX-OUTS, CONDUITS, ETC., AS REQUIRED BY OTHER TRADES IN THE CONCRETE STRUCTURE.

23. STEEL DETAILER SHALL IMPLEMENT OSHA SAFETY STANDARDS FOR STEEL ERECTIONS.

24. FURNISH AND INSTALL ANCHOR BOLTS WITH ONE WASHER (PER ASCE TABLE 14-2) AND HEAVY HEX NUT, SETTING PLATES (1/4" THICK LEVELING PLATE) AND EMBEDDED PLATES, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

25. ALL STRUCTURAL STEEL INCLUDING BASE PLATE AND TOPS OF ANCHOR BOLTS TO BE EXPOSED TO SOIL OR TO BE ENCASED IN CONCRETE ARE TO BE COATED WITH AN APPROVED COAL TAR EPOXY, 16 MILS MINIMUM THICKNESS.

26. ALL COLUMN CAP PLATES SHALL BE 1/2" THICK MINIMUM EXCEPT AS OTHERWISE NOTED.

27. PROVIDE INCLINED PLATES FOR ALL SLOPING BEAMS TO ENSURE TRUE BEARING.

28. PROVIDE FITTED STIFFENER PLATES EACH SIDE OF BEAM WEB AT CENTERLINE OF SUPPORT FOR ALL CANTILEVERED BEAMS, UNDER SUPPORTED COLUMNS AND POSTS UP. STIFF PLATE THICKNESS SHALL BE SAME THICKNESS AS THE COLUMN WALLS/FLANGES BUT NO SMALLER THAN 3/8" THICK.

29. TOP OF STEEL (T.O.S.) ELEVATIONS INDICATED ON THE DRAWINGS REFERS TO TOP OF TOP-BEAM FLANGE.

30. STEEL BEAMS PARALLEL TO JOISTS SHALL BE AT THE SAME ELEVATION AS THE JOISTS, UNLESS OTHERWISE NOTED.

31. BRACING MEMBERS SHALL BE DETAILED TO AVOID ECCENTRIC CONNECTIONS.

32. ALL MEMBERS OR PORTIONS OF THAT ARE FIELD CUT/DRILLED HOLES AND OR ARE TO BE WELDED SHALL BE FREE OF OIL, PAINT AND DEBRIS DOWN TO CLEAN STEEL. FIELD WELDS SHALL BE FREE OF SLAG AND CLEAN.

33. ALL TREATED SURFACES (FIELD CUTS/DRILLED HOLES & WELDS) THAT ARE EXPOSED TO THE ELEMENTS SHALL BE PAINTED WITH 2 COATS OF ZINC RICH (GALVANIZED) PAINT.

LIGHT GAGE METAL FRAMING NOTES:

REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL STRUCTURAL METAL STUD WORK. FOR STRUCUTRAL METAL STUD FRAMING RENOVATIONS, NEW STUD FRAMING MAY NOT BE WITHIN THE STRUCTURAL WORK; HOWEVER, REMOVING, CUTTING, RE-INSTALLING, ETC. EXISTING METAL STUD FRAMING WILL BE REQUIRED TO COMPLETE THE PROJECT. BELOW ARE MINIMUM REQUIREMENTS FOR NEW AND RENOVATED METAL STUD STRUCTURAL WORK. RENOVATED STRUCTURAL METAL STUD FRAMING WORK SHALL MATCH EXISTING UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS.

1. ALL LIGHT GAGE COLD FORMED MEMBER DESIGN ARE BASED ON COLD-FORM STEEL DESIGN MANUAL, AS PUBLISHED BY THE AISI AND THE LIGHT GAGE STRUCTURAL STEEL FRAMING DESIGN HANDBOOK AS PUBLISHED BY LGSI.

2. SHOP DRAWINGS SHALL SHOW COMPLETE FRAMING ELEVATIONS, SECTIONS AND DETAILS OF

5.2D - PLAN SET

CAST-IN-PLACE CONCRETE (IBC 1705.3, 1705.3.1, 1705.3.2 & 1705.12.1)

ITEM	FREQUENCIES				DETAIL DESCRIPTION
INSPECT REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT		CONTINUOUS	X	PERIODIC	VERIFY PRIOR TO PLACING CONCRETE THAT REINFORCING IS OF SPECIFIED TYPE, GRADE AND SIZE; THAT IT IS FREE OF OIL, DIRT AND RUST; THAT IT IS LOCATED AND SPACED PROPERLY; THAT HOOKS, BENDS, TIES, STIRRUPS AND SUPPLEMENTAL REINFORCEMENT ARE PLACED CORRECTLY. THAT LAP LENGTHS, STAGGER AND OFFSETS ARE PROVIDED; AND THAT ALL MECHANICAL CONNECTIONS ARE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS AND/OR EVALUATION REPORT. REFERENCED STANDARD: STEEL REINFORCEMENT PROPERTIES, DURABILITY AND EMBEDMENTS (ACI 318 CH. 20), MINIMUM SPACING OF REINFORCEMENT (ACI 318 SEC. 25.2), STANDARD HOOKS, SEISMIC HOOKS, CROSSTIES, AND MINIMUM INSIDE BEND DIAMETERS (ACI 318 SEC. 25.3), CONCRETE PRODUCTION (ACI 318 SEC. 26.5.1), CONCRETE PLACEMENT AND CONSOLIDATION (ACI 318 SEC. 26.5.2) AND CURING CONCRETE (318 SEC. 26.5.3) AND SHOTECRETE REINFORCEMENT (IBC 1908.4).
REINFORCING BAR WELDING	X	CONTINUOUS		PERIODIC	FOR WELDING OF REINFORCING STEEL USED IN INTERMEDIATE OR SPECIAL CONCRETE MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OR SHEAR REINFORCEMENT. IBC 1705.3.1: WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF AWS D1.4 FOR SPECIAL INSPECTION AND OF AWS D1.4 FOR SPECIAL INSPECTOR QUALIFICATION.
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		CONTINUOUS	X	PERIODIC	REFERENCED STANDARDS: CONSTRUCTION DOCUMENTS AND INSPECTION WELDING (ACI 318 SEC. 26.6.4) & AWS D1.4
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16" AND		CONTINUOUS	X	PERIODIC	REFERENCED STANDARDS: CONSTRUCTION DOCUMENTS AND INSPECTION WELDING (ACI 318 SEC. 26.6.4) & AWS D1.4
C. INSPECT ALL OTHER WELDS.	X	CONTINUOUS		PERIODIC	REFERENCED STANDARDS: CONSTRUCTION DOCUMENTS AND INSPECTION WELDING (ACI 318 SEC. 26.6.4) & AWS D1.4
MATERIAL TESTS					IBC 1705.3.2: IN THE ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE TO QUALITY STANDARDS FOR MATERIALS IN CHAPTER 19 AND 20 OF ACI 318, THE BUILDING OFFICIAL SHALL REQUIRE TESTING OF MATERIALS IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND CRITERIA FOR THE MATERIAL IN ACI 318, CHAPTER 19 (CONCRETE: DESIGN AND DURABILITY REQUIREMENTS) AND ACI 318, 20 (STEEL REINFORCEMENT PROPERTIES, DURABILITY, AND EMBEDMENTS).
INSPECT ANCHOR CAST-IN (BOLTS & EMBEDS) IN CONCRETE	X	CONTINUOUS		PERIODIC	REFERENCED STANDARDS: INSTALLATION AND INSPECTION OF ANCHORS - INSTALLATION OF ANCHORS REQUIREMENTS (ACI 318, SEC. 17.8.2)
POST-INSTALLED DOWELS	X	CONTINUOUS		PERIODIC	ALL POST-INSTALLED DOWELS SHALL BE SPECIALLY INSPECTED AS REQUIRED BY THE APPROVED ICC-ES REPORT.
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS					SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE ACI 318 SEC. 17.8.2 OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENATIONS TO RESIST SUSTAINED TENSION LOADS	X	CONTINUOUS		PERIODIC	REFERENCED STANDARDS: INSTALLATION AND INSPECTION OF ANCHORS - INSTALLATION OF ADHESIVE ANCHORS REQUIREMENTS (ACI 318 SEC. 17.8.2.2 AND SEC. 17.8.2.4). INSTALLER SHALL BE CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. THE CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT. THE SPECIAL INSPECTOR SHALL FURISH A REPORT TO THE EOR AND BUILDING OFFICIAL THAT THE WORK COVERED HAS BEEN PERFORMED, MATERAILS USED AND INSTALLATION PROCEDURES CONFORM WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE MANUF.'S PRINTED INSTALLATION INSTRUCTIONS.
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS THAT ARE NOT INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENATIONS TO RESIST SUSTAINED TENSION LOADS		CONTINUOUS	X	PERIODIC	REFERENCED STANDARDS: INSTALLATION AND INSPECTION OF ANCHORS - INSTALLATION OF ANCHORS REQUIREMENTS (ACI 318 SEC. 17.8.2)
VERIFY USE OF REQUIRED DESIGN MIX.		CONTINUOUS	X	PERIODIC	VERIFY THAT ALL MIXES USED COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS; REFERENCED STANDARDS: ACI 318 CH. 19 (CONCRETE: DESIGN AND DURABILITY REQUIREMENTS), ACI 318 SEC. 26.4.3 (PROPORTIONING OF CONCRETE MIXTURES), AND ACI 318 SEC. 26.4.4 (DOCUMENTATION OF CONCRETE MIXTURE CHARACTERISTICS); IBC 1904.1 (DURABILITY REQUIREMENT OF STRUCTURAL CONCRETE), IBC 1904.2 (DURABILITY REQUIREMENT OF NONSTRUCTURAL CONCRETE), IBC 1908.2 (SHOTCRETE PROPORTIONS AND MATERAILS) AND IBC 1908.3 (SHOTCRETE REINFORCEMENT)
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TEST, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	CONTINUOUS		PERIODIC	REFERENCED STANDARDS: ASTM C 172 (STANDARD PRACTICE OF SAMPLING FRESHLY MIXED CONCRETE), ASTM C 31 (STANDARD PRACTICE FOR MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD), ACI 318 SEC. 26.5.4 (CONCRETING IN COLD WEATHER), ACI 318 SEC. 26.5.5 (CONCRETING IN HOT WEATHER) AND ACI 318 SEC. 26.12 (CONCRETE EVALUATION AND ACCEPTANCE). IBC 1908.10 (SHOTCRETE STRENGTH TESTS)
CONCRETE SAMPLING FOR STRENGTH TESTS, SLUMP, AIR CONTENT, AND TEMPERATURE	X	CONTINUOUS		PERIODIC	
INSPECT CONCRETE & SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	CONTINUOUS		PERIODIC	REFERENCED STANDARDS: ACI 318 SEC. 26.4 (CONCRETE MATERAILS AND MIXTURE REQUIREMENT), IBC 1908.6 (SHOTCRETE REBOUND), IBC 1908.7 (SHOTCRETE JOINTS) AND IBC 1908.8 (SHOTCRETE DAMAGE)
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		CONTINUOUS	X	PERIODIC	VERIFY THAT THE AMBIENT TEMPERATURE FOR CONCRETE IS KEPT AT > 50°F FOR AT LEAST 7 DAYS AFTER PLACEMENT, HIGH-EARLY-STRENGTH CONCRETE SHALL BE KEPT AT > 50°F FOR AT LEAST 3 DAYS. ACCELERATED CURING METHODS MAY BE USED (SEE ACI 318). THE AMBIENT TEMPERATURE FOR SHOTCRETE SHALL BE > 40°F FOR THE SAME PERIOD OF TIME AS NOTED FOR CONCRETE. SHOTCRETE SHALL BE KEPT CONTINUOUSLY MOIST FOR AT LEAST 24 HOURS AFTER SHOTCRETING. ALL CONCRETE MATERIALS, REINFORCEMENT, FORMS, FILLERS, AND GROUND SHALL BE FREE FROM FROST. IN HOT WEATHER CONDITIONS ENSURE THAT APPROPRIATE MEASURES ARE TAKEN TO AVOID PLASTIC SHRINKAGE CRACKING AND THAT THE SPECIFIED WATER/CEMENT RATIO IS NOT EXCEEDED. REFERENCED STANDARDS: ACI 318 SEC. 26.5.4 (CONCRETING IN COLD WEATHER), ACI 318 SEC. 26.5.5 (CONCRETING IN HOT WEATHER), ACI SEC. 26.5.6 (CONSTRUCTION, CONTRACTION, AND ISOLATION JOINT; IBC 1908.9 (SHOTCRETE CURING)
INSPECT PRE-STRESSED CONCRETE FOR					
A. APPLICATION OF PRESTRESSING FORCES; AND	X	CONTINUOUS		PERIODIC	REFERENCED STANDARDS: ACI 318 SEC. 26.10.2 (ADDITIONAL REQUIREMENTS FOR PRESTRESSED CONCRETE - COMPLIANCE REQUIREMENT)
B. GROUTING OF BONDED PRESTRESSING TENDONS	X	CONTINUOUS		PERIODIC	REFERENCED STANDARDS: ACI 318 SEC. 26.10.2 (ADDITIONAL REQUIREMENTS FOR PRESTRESSED CONCRETE - COMPLIANCE REQUIREMENT)
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.		CONTINUOUS	X	PERIODIC	VERIFY THAT ALL PRECAST ELEMENTS ARE LIFTED, ASSEMBLED AND BRACED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. REFERENCED STANDARDS: ACI 318, SEC. 26.9 (ADDITIONAL REQUIREMENTS FOR PRECAST CONCRETE)
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLAB.		CONTINUOUS	X	PERIODIC	REFERENCED STANDARDS: ACI 318, CH. 26.10.2 (ADDITIONAL REQUIREMENTS FOR PRESTRESSED CONCRETE - COMPLIANCE REQUIREMENT)
INSPECT FORMWORK FOR SHAPE, LOCATIONS AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		CONTINUOUS	X	PERIODIC	VERIFY THAT THE FORMS ARE PLACED PLUMB AND CONFORM TO THE SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE APPROVED CONSTRUCTION DOCUMENTS. REFERENCED STANDARDS: ACI 318, SEC. 26.10.1(b) (ADDITIONAL REQUIREMENTS FOR PRESTRESSED CONCRETE - COMPLIANCE REQUIREMENT - STRESSING SEQUENCE OF TENDONS)
REINFORCEMENT IN SPECIAL MOMENT FRAMES, SPECIAL STRUCTURAL WALLS AND COUPLING BEAMS		CONTINUOUS	X	PERIODIC	VERIFY THAT ASTM A 615 REINFORCING STEEL USED IN THESE AREAS COMPLIES WITH ACI 318 BY MEANS OF CERTIFIED MILL TEST REPORTS. IF THIS REINFORCING STEEL IS TO BE WELDED CHEMICAL TESTS SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318

NOTES:
1. WHERE APPLICABLE, REFER TO SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.
2. AMERICAN CONCRETE INSTITUE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI-318-14)

COLD-FORMED STEEL DECK (IBC 1705.2.2) CONTINUES

TABLE 1.8 INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FASTENING					
A		PERFORM		PERFORM	CHECK SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS
B		PERFORM		PERFORM	CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS
C		PERFORM		PERFORM	CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS
D		PERFORM		PERFORM	VERIFY REPAIR ACTIVITIES
E		PERFORM		PERFORM	DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS
NOTES: FOR ADDITIONAL REQUIREMENTS, REFER TO QA/QC-2018 STANDARD.					
SDI DEFINITIONS					
QA		QUALITY ASSURANCE - INSPECTION OF THE MATERIALS, INSTALLATION, FABRICATION, ERECTION AND OR PLACEMENT OF COMPONENTS AND CONNECTIONS, PERFORMED BY AN AGENCY REQUIRING SPECIAL EXPERTISE TO CONFIRM COMPLIANCE WITH CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. QUALITY ASSURANCE SHALL BE PROVIDED BY AUTHORITY HAVING JURISDICTION, APPLICABLE BUILDING CODE, OWNER & OWNER'S DESIGNATED REPRESENTATIVE FOR CONSTRUCTION.			
QC		QUALITY CONTROL - CONTROLS AND INSPECTIONS IMPLEMENTED BY THE INSTALLER TO CONFIRM THAT THE MATERAILS PROVIDED AND WORK PERFORMED MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS, INSTALLATION DRAWINGS, SHOP DRAWINGS, DESIGN DOCUMENTS AND REFERENCED STANDARDS.			
OBSERVE		L...			
PERFORM		L...			
DOCUMENT		INPECTOR SHALL PREPARE REPORTS OR OTHER APPROPRIATE WRITTEN DOCUMENTATION INDICATING THAT THE WORK HAS OR HAS NOT BEEN PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS			
FREQUENCY OF OBSERVATIONS		SHALL BE ADEQUATE TO CONFIRM THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPLICABLE DOCUMENTS.			
NON-COMPLIANCE		WORK OBSERVED DETERMINED THAT THE MATERIALS AND/OR WORKMANSHIP ARE NOT IN CONFORMANCE WITH THE APPLICABLE DOCUMENTS, ADDITIONAL INSPECTIONS SHALL BE PERFORMED TO DETERMINE THE EXTENT OF THE NON-CONFORMANCE			

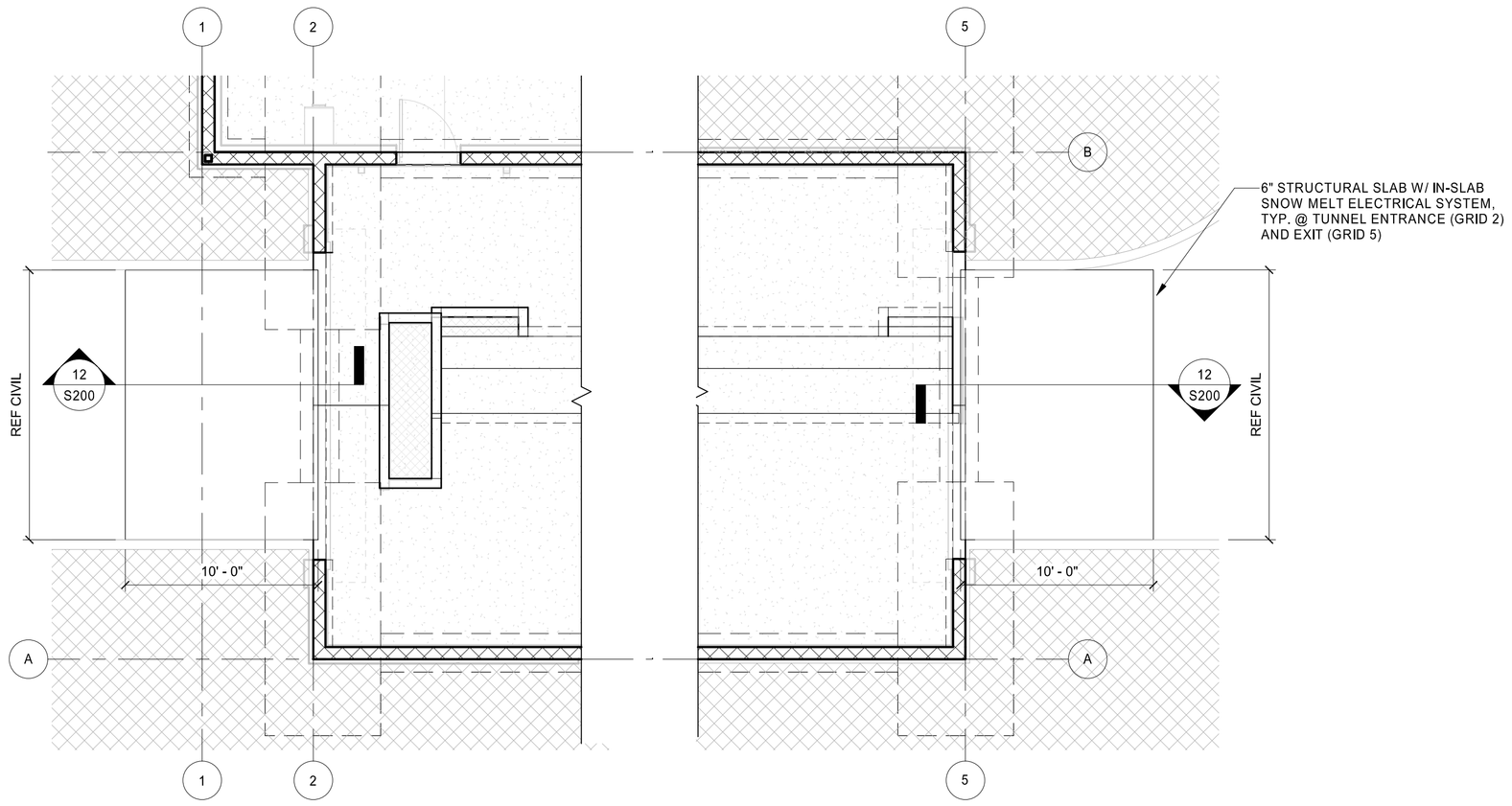
STEEL CONSTRUCTION (IBC 1705.2, 1705.2.1, 1705.11.3 & 1705.12.1)

ITEM	FREQUENCIES				DETAIL DESCRIPTION
WIND-FORCE-RESISTING SYSTEMS OR SEISMIC-FORCE-RESISTING SYSTEMS		CONTINUOUS	X	PERIODIC	WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRGAMS AND FRAMING.
SEISMIC FORCE RESISTING SYSTEMS AND ELEMENTS (DRAG STRUTS, COLLECTORS, CHORDS, AND FOUNDATION ELEMENTS) OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY B & C		CONTINUOUS		PERIODIC	SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENT OF AISC 341, EXCLUDING SYSTEMS 'NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE", WITH RESPONSE MODIFICATION COEF., R, OF 3 OR LESS.
SEISMIC FORCE RESISTING SYSTEMS AND ELEMENTS (DRAG STRUTS, COLLECTORS, CHORDS, AND FOUNDATION ELEMENTS) OF BUILDINGS AND STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F		CONTINUOUS		PERIODIC	SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENT OF AISC 341.
PRIOR TO WELDING (TABLE N5.4-1, AISC 360-10)					
VERIFY WELDING PROCEDURES	X	CONTINUOUS		PERIODIC	
PROVIDE MANUFACTURER'S CERTIFICATIONS FOR WELDING CONSUMABLES.	X				
MATERIAL IDENTIFICATION		CONTINUOUS	X	PERIODIC	VERIFY TYPE AND GRADE OF MATERIAL
WELDER IDENTIFICATION		CONTINUOUS	X	PERIODIC	VERIFY THERE IS A SYSTEM IN PLACE TO IDENTIFY THE ELDER WHO HAS WELDED A JOINT OR MEMBER
FIT-UP GROOVE WELDS		CONTINUOUS	X	PERIODIC	VERIFY JOINT PREPARATION, DIMENSIONS, CLEANLINESS, TACKING AND BACKING
ACCESS HOLES		CONTINUOUS	X	PERIODIC	VERIFY CONFIGURATION AND FINISH
FIT-UP FILLET WELDS		CONTINUOUS	X	PERIODIC	VERIFY ALIGNMENT, GAPS AT ROOT, CLEANLINESS OF STEEL SURFACES, TACK WELD QUALITY AND LOCATION
DURING WELDING (TABLE N5.4-2, AISC 360-10)					
USE OF QUALIFIED INSPECTORS		CONTINUOUS	X	PERIODIC	VERIFY THAT ELDERS ARE APPROPRIATELY QUALIFIED
CONTROL AND HANDLING OF WELDING CONSUMABLES		CONTINUOUS	X	PERIODIC	VERIFY PACKAGING AND EXPOSURE CONTROL
CRACKED TACK WELDS		CONTINUOUS	X	PERIODIC	VERIFY WELDING IS NOT OVER A CRACKED TACK WELD
ENVIRONMENTAL CONDITIONS		CONTINUOUS	X	PERIODIC	VERIFY WIND SPEED IS WITHIN LIMITS AS WELL AS PRECIPITATION AND TEMPERATURE
WPS FOLLOWED		CONTINUOUS	X	PERIODIC	VERIFY ITEMS SUCH AS WELDING EQUIPMENT SETTINGS, TRAVEL SPEED, WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED, AND PROPER POSITION
WELDING TECHNIQUES		CONTINUOUS	X	PERIODIC	VERIFY INTERPASS AND FINAL CLEANING, EACH PASS IS WITHIN PROFILE LIMITATION, AND QUALITY OF EACH PASS
AFTER WELDING (TABLE N5.4-3, AISC 360-10)					
WELDS CLEANED		CONTINUOUS	X	PERIODIC	VERIFY THAT WELDS HAVE BEEN PROPERLY CLEANED
SIZE, LENGTH AND LOCATION OF WELDS	X	CONTINUOUS		PERIODIC	
WELDS MEET VISUAL ACCEPTANCE CRITERIA	X	CONTINUOUS		PERIODIC	
ARC STRIKES	X	CONTINUOUS		PERIODIC	
K-AREA	X	CONTINUOUS		PERIODIC	
BACKING & WELDING TABS REMOVED	X	CONTINUOUS		PERIODIC	
REPAIR ACTIVITIES	X	CONTINUOUS		PERIODIC	
DOCUMENT ACCEPTANCE/REJECTION OF WELD	X	CONTINUOUS		PERIODIC	
NONDESTRUCTIVE TESTING (SECTION N5.5, AISC 360-10)					
CJP WELDS (RISK CAT. II)		CONTINUOUS	X	PERIODIC	ULTRASONIC TESTING SHALL BE PERFORMED ON 10% OF CJP GROOVE WELDS IN BUTT, T- AND CORNER JOINTS SUBJECT TO TRANSVERSELY APPLIED TENSION LOADING IN MATERIALS 5/16-INCH THICK OR GREATER, TESTING RATE MUST BE INCREASED IF >5% OF WELDS HAVE UNACCEPTABLE DEFECTS.
ACCESS HOLES (FLANGE > 2")	X	CONTINUOUS		PERIODIC	
WELDED JOINTS SUBJECT TO FATIGUE	X	CONTINUOUS		PERIODIC	
PRIOR TO BOLTING (TABLE N5.6-1, AISC 360-10)					
MANUFACTURER'S CERTIFICATIONS	X	CONTINUOUS		PERIODIC	CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS
FASTENERS MARKINGS		CONTINUOUS	X	PERIODIC	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL		CONTINUOUS	X	PERIODIC	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)
PROPER BOLTING PROCEDURE		CONTINUOUS	X	PERIODIC	PROPER BOLTING PROCEDURE SELECTED FROM THE JOINT DETAIL
CONNECTING ELEMENTS		CONTINUOUS	X	PERIODIC	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS
PRE-INSTALLATION VERIFICATION TESTING		CONTINUOUS	X	PERIODIC	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED
PROPER STORAGE		CONTINUOUS	X	PERIODIC	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS
DURING BOLTING (TABLE N5.6-2, AISC 360-10)					
FASTENER ASSEMBLIES		CONTINUOUS	X	PERIODIC	FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED
SNUG-TIGHT CONDITION		CONTINUOUS	X	PERIODIC	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATION		CONTINUOUS	X	PERIODIC	
FASTENERS PRETENSIONED		CONTINUOUS	X	PERIODIC	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES
AFTER BOLTING (TABLE N5.6-3, AISC 360-10)					
DOCUMENTATION	X	CONTINUOUS		PERIODIC	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS
COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT (TABLE N6.1, AISC 360-10)					
STEEL DECK	X	CONTINUOUS		PERIODIC	PLACEMENT AND INSTALLATION OF STEEL DECK
STEEL HEADED STUD ANCHORS	X	CONTINUOUS		PERIODIC	PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS
DOCUMENTATION	X	CONTINUOUS		PERIODIC	DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS
OTHER STEEL INSPECTIONS (TABLE N5.7, AISC 360-10; TABLES J8-1 AND J10-1, AISC 341-10)					
STRUCTURAL STEEL DETAILS		CONTINUOUS	X	PERIODIC	ALL FABRICATED STEEL AND THEIR CONNECTIONS SHALL BE INSPECTED TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN IN THE APPROVED PLANS
ANCHOR RODS/EMBEDS SUPPORTING STRUCTURAL STEEL		CONTINUOUS	X	PERIODIC	SHALL BE ON THE PREMISES DURING THE PLACEMENT OF ANCHOR RODS/EMBEDMENTS, VERIFY DIAMETER, GRADE, TYPE, AND LENGTH OF ELEMENT AND THE EXTENT OR DEPTH OF EMBEDMENT PRIOR TO PLACEMENT OF CONCRETE
REDUCED BEAM SECTION (RBS)		CONTINUOUS	X	PERIODIC	VERIFY CONTOUR AND FINISH AS WELL AS DIMENSIONAL TOLERANCES (SEE TABLE J8-1 OF AISC 341)
PROTECTED ZONES			X		VERIFY THAT NO HOLES OR UNAPPROVED ATTACHMENTS ARE MADE WITHIN THE PROTECTED ZONE (SEE TABLE J8-1 OF AISC 341)
CANTILEVERED RAIL POSTS			X	PERIODIC	STRUCTURAL STEEL ELEMENTS, WELDING INSPECTION OF WELDS AT THE BASE

MASONRY CONSTRUCTION (IBC 1705.4 & 1705.4.2) CONTINUES

ITEM	FREQUENCIES				DETAIL DESCRIPTION
SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402/ACI 530/ASCE 5 AND TMS 602/ACI 530.1/ASCE 6.					
MINIMUM QUALITY ASSURANCE PROGRAM FOR MASONRY IN RISK CATEGORY I, II, OR III STRUCTURES					
PRIOR TO GROUTING CONTINUES:					
					DETAILS OF REINFORCEMENT AND METAL ACCESSORIES (TMS 402/ACI 530/ ASCE 5, SEC. 6.1) FOR BAR EMBEDMENT, REINFORCEMENT SIZES, PLACEMENT OF REINFORCEMENT, PROTECTION OF REINFORCEMENT AND METAL ACCESSORIES, AND BAR HOOKS/BENDS), ANCHOR BOLT PLACEMENT (TMS 402/ACI 530/ ASCE 5, SEC. 6.2.1), MINIMUM PERMISSIBLE EFFECTIVE EMBEDMENT LENGTH (TMS 402/ACI 530/ ASCE 5, SEC.6.2.6) AND ANCHOR BOLT EDGE DISTANCE (TMS 402/ACI 530/ ASCE 5, SEC.6.2.7)
PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		CONTINUOUS	X	PERIODIC	VERIFY THAT GROUT IS PROPORTIONED PER ASTM C476 AND HAS A SLUMP BETWEEN 8-1\ INCHES. SELF-CONSOLIDATED GROUT SHALL NOT BE PROPORTIONED ONSITE. MIXING GROUT (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 2.6 B) GROUT FOR PRESTRESSING TENDONS (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 2.4 G.1.b)
CONSTRUCTION OF MORTAR JOINTS		CONTINUOUS		PERIODIC	MASONRY ERECTION, PLACING MORTAR AND UNITS (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.3B)
VERIFY DURING CONSTRUCTION:					
SIZE AND LOCATION OF STRUCTURAL ELEMENTS		CONTINUOUS	X	PERIODIC	VERIFY THAT STRUCTURAL ELEMENTS ARE PLACED IN LOCATIONS SPECIFIED ON THE APPROVED CONSTRUCTION DOCUMENTS AND TO THE TOLERANCES. MASONRY ERECTION, SITE TOLERANCES (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.3 F)
TYPE, SIZE AND LOCATION OF ANCHORS AND OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION		CONTINUOUS	X	PERIODIC	VERIFY THAT STRUCTURAL ELEMENTS ARE PLACED IN LOCATIONS SPECIFIED ON THE APPROVED CONSTRUCTION DOCUMENTS. HEADED OR BENT BAR ANCHOR BOLTS SHALL BE EMBEDDED IN GROUT. CONTRACT DOCUMENTS AND CALCULATIONS CODE-REQUIRED DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, AND OTHER CONSTRUCTION, INCLUDING THE TYPE, SIZE, AND LOCATION CONNECTORS (TMS 402/ACI 530/ ASCE 5, SEC. 1.2.1(e)), CORROSION RESISTANCE REQUIREMENT FOR WALL TIES, SHEET-METAL ANCHORS, STRAP PLATES, AND BARS (TMS 402/ACI 530/ ASCE 5, SEC. 6.1.4.3) AND ANCHOR BOLT PLACEMENT REQUIREMENTS (TMS 402/ACI 530/ ASCE 5, SEC. 6.2.1)
WELDING OF REINFORCING BARS	X	CONTINUOUS		PERIODIC	WELDED SPLICES SHALL HAVE THE BARS BUTTED AND WELDED TO DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR. WELDING SHALL CONFORM TO AWS D1.4, REINFORCEMENT TO BE WELDED SHALL CONFORM TO ASTM A706 OR CONTRACTOR TO SUBMIT BAR SHOWING ITS CHEMICAL ANALYSIS AND CARBON EQUIVALENT PER AWS D1.4, EXISTING BARS SHALL BE A706 OR BE TESTED FOR WELDABILITY (ALLOWABLE DESIGN WELDED SPLICE (TMS 402/ACI 530/ ASCE 5, SEC. 8.1.6.7.2, STRENGTH DESIGN WELDED SPLICE TMS 402/ACI 530/ ASCE 5, SEC. 9.3.3.4(c)), AAC MASONRY WELDED SPLICE (TMS 402/ACI 530/ ASCE 5, SEC. 11.3.3.4(b))
PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 DEG. F) OR HOT WEATHER (TEMPERATURE ABOVE 90 DEG. F)		CONTINUOUS	X	PERIODIC	WHEN THE AMBIENT AIR TEMPERATURE IS <40°F, WHEN THE AMBIENT AIR TEMPERATURE IS >100°F, OR >90°F WITH A WIND VELOCITY >8MPH. COLD WEATHER CONSTRUCTION (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 1.8 C) AND HOT WEATHER CONSTRUCTION (TMS 602/ACI 530.1/ ASCE 6, ARTICLE1.8 D)
APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X	CONTINUOUS		PERIODIC	THE PRE-STRESSING FORCE AT EACH TENDON SHALL BE VERIFIED BY TWO METHODS: (1) MEASURING THE STEEL ELONGATION AND (2) THE OBSERVED JACKING FORCE APPLIED TO THE TENDON. THE MEASURED ELONGATION SHOULD BE COMPARED TO THE LOAD-ELONGATION CURVES FOR THE PRE-STRESSING STEEL USED AND NOT MORE THAN A 5% DIFFERENCE SHOULD BE FOUND WHEN COMPARING TO THE ACTUAL FORCE APPLIED. A 7% DIFFERENCE IS ALLOWED FOR POST-TENSIONED TENDONS. WHEN TOTAL LOSS OF PRESTRESS DUE TO UNREPLACED BROKEN PRESTRESSING TENDONS EXCEEDS 2% OF TOTAL PRESTRESS, NOTIFY THE ARCHITECT/ENGINEER. PRESTRESSING TENDON INSTALLATION AND STRESSING PROCEDURE - APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.6 B)
PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	CONTINUOUS		PERIODIC	GROUT PLACEMENT - ALLOWABLE TIME FOR GROUT PLACEMENT, READY-MIXED GROUT, CONFINEMENT, GROUT POUR HEIGHT, GROUT LIFT HEIGHT, CONSOLIDATION, ETC, (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.5) AND PRESTRESSING TENDON INSTALLATION AND STRESSING PROCEDURE - GROUTING BONDED TENDONS FOR MIXING TECHINQUES AND TEMPERATURE REQUIREMENTS (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.6 C)
PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X	CONTINUOUS (REQUIRED FOR THE FIRST 5000 SF. OF AAC MASONRY)	X	PERIODIC (REQUIRED FOR THE FIRST 5000 SF. OF AAC MASONRY)	MASONRY ERECTION FOR AAC MASONRY (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.3 B.9) AND SITE TOLERANCES MORTAR JOINT THICKNESS REQUIREMENTS (TMS 602/ACI 530.1/ ASCE 6, ARTICLE 3.3 F.1b)
OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS			X	PERIODIC	COMPRESSIVE STRENGTH DETERMINATION - UNIT STRENGTH METHOD FOR GROUTED CLAY MASONRY (TMS 602/ACI 530.1/

5.2D - PLAN SET



2 PARTIAL FOUNDATION PLAN @ TUNNEL HEATED SLAB

3/16" = 1'-0"

FOUNDATION PLAN NOTES:

1. FOR FND., MATERIAL, & GENERAL NOTES, SEE DWGS. S001 & S002.
2. FOR SPECIAL INSPECTION NOTES, SEE DWG. S003.
3. FOR BASE PL. DETAILS, SEE S201.
4. FOR ANC. BOLT DETAILS, SEE DETAIL 12 / S201
5. FOR FND. WALL REINF. AT CORNER, INTERSECTION, & END, SEE DETAIL 1 / S201
6. FOR FND. WALL CONTROL JOINT, SEE DETAIL 2B / S201
7. FOR FND. WALL CONSTR. JOINT, SEE DETAIL 2A / S201
8. FOR FND. WALL PIPE SLEEVE REINF. DETAILS, SEE DETAIL 8 / S201
9. FOR FND. WALL BOX-OUT DETAIL, SEE DETAIL 7 / S201
10. FOR PIPE NOTCH AT FOOTING DETAIL, SEE DETAIL 9 / S201
11. FOR PIPE ENCASEMENT BELOW FTG. DETAIL, SEE DETAIL 10 / S201
12. FOR MAS. WALL REINF. ELEVATIONS, SEE ELEVATIONS AND S301

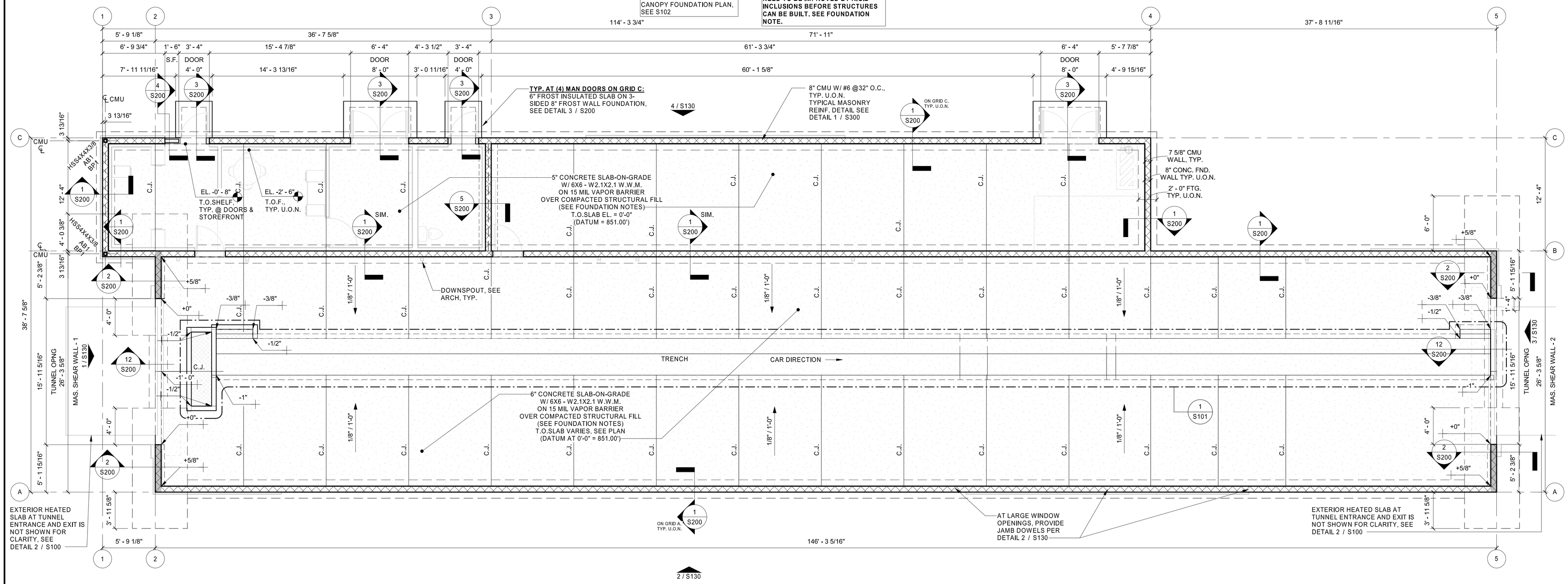
ABBREVIATIONS

T.O.W	DENOTES	TOP OF FOUNDATION WALL
T.O.F.	DENOTES	TOP OF FOOTING
T.O.P.	DENOTES	TOP OF PIER
T.O.SLAB	DENOTES	TOP OF SLAB
F.O.W.	DENOTES	FACE OF FOUNDATION WALL
CL. TO F.O.	DENOTES	CENTERLINE TO FACE OF
BP	DENOTES	BASE PLATE
TYP.	DENOTES	TYPICAL
U.O.N.	DENOTES	UNLESS OTHERWISE NOTED
(E)	DENOTES	EXISTING
E.S.	DENOTES	EACH SIDE
S.F.	DENOTES	STOREFRONT
	DENOTES	SHEAR WALL

G.C. SHALL COORDINATE FINAL DOOR LOCATIONS AND SIZES.

PAY STATION & VACUUM CANOPY FOUNDATION PLAN, SEE S102

NOTE:
SOILS UNDER THE STRUCTURES NEED TO BE IMPROVED BY RIGID INCLUSIONS BEFORE STRUCTURES CAN BE BUILT. SEE FOUNDATION NOTE.



1 FOUNDATION PLAN @ BUILDING

3/16" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	GGB
DRAWN BY:	YJN
DOCUMENT DATE:	01/10/24

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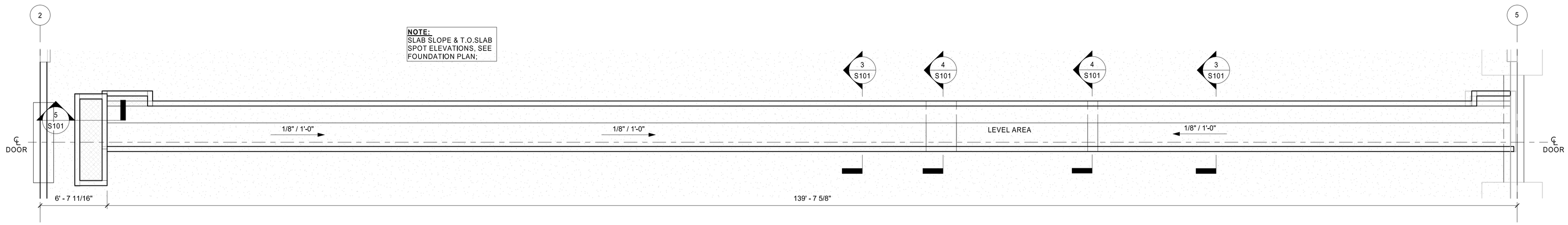
PRINT NAME: LUKE M. TEAS
SIGNATURE:
LICENSE NO.: 50338
DATE: 2024.01.11 08:14:44-06'00'

FOUNDATION PLAN

SHEET: S100

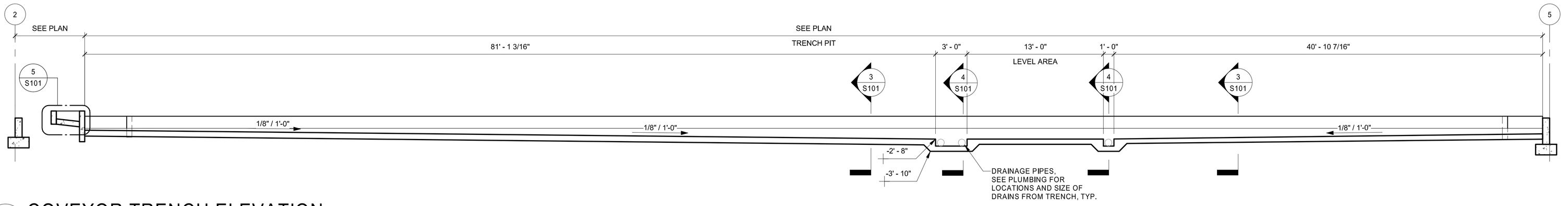
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4.8 FIRST FOUNDATION PLAN

5.2D - PLAN SET



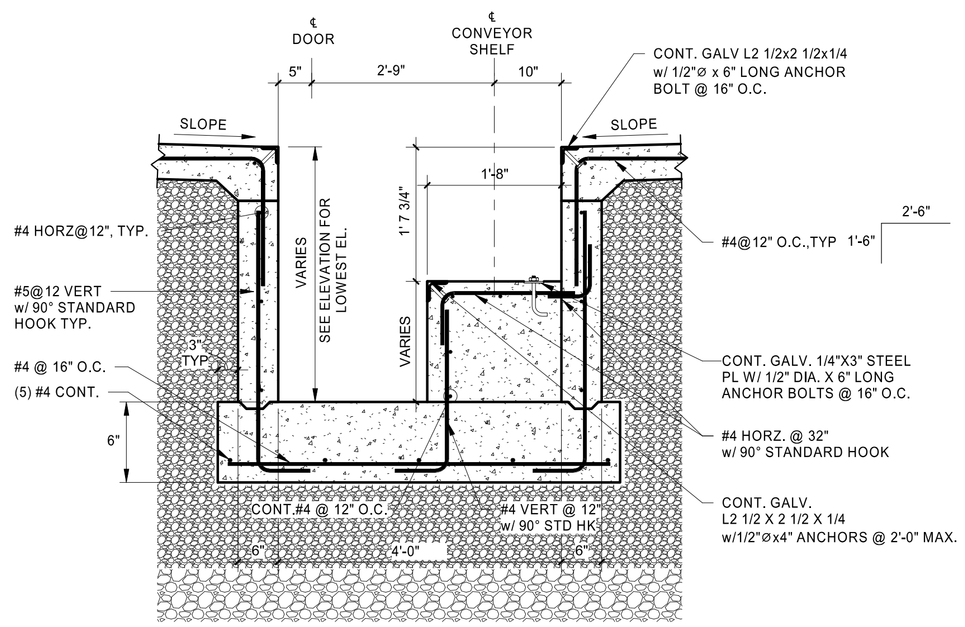
1 PARTIAL FOUNDATION PLAN @ CONVEYOR TRENCH

3/16" = 1'-0"



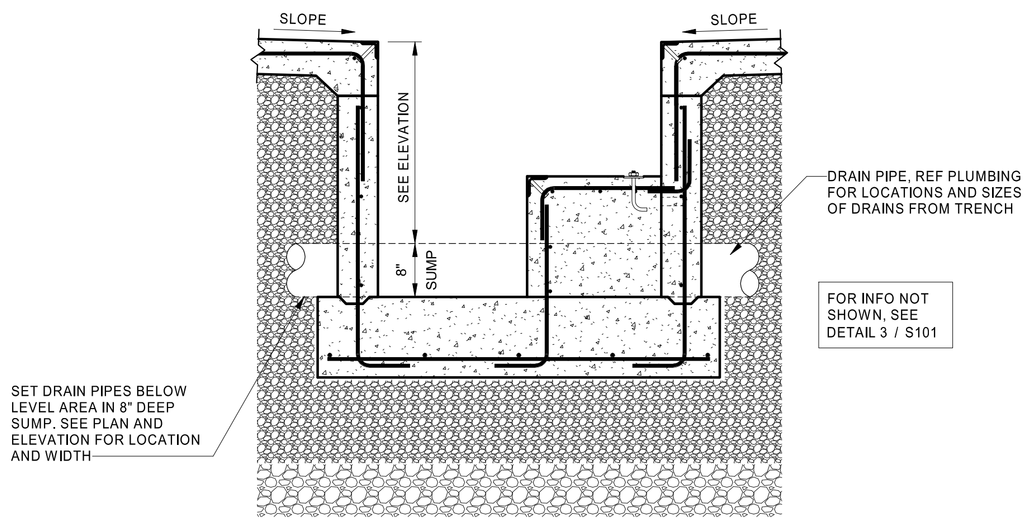
2 COVEYOR TRENCH ELEVATION

3/16" = 1'-0"



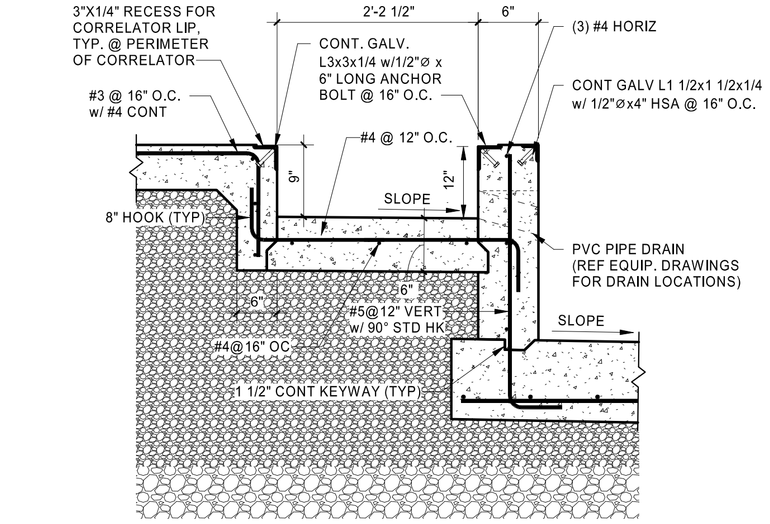
3 SECTION @ TRENCH

3/4" = 1'-0"



4 SECTION @ TRENCH DRAINAGE PIPE

3/4" = 1'-0"



5 SECTION @ CORRELATOR

3/4" = 1'-0"

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TRUE BLUE CAR WASH

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JOB NUMBER: 06-23-80005

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DRAWN BY:	YJN
DOCUMENT DATE:	01/10/24

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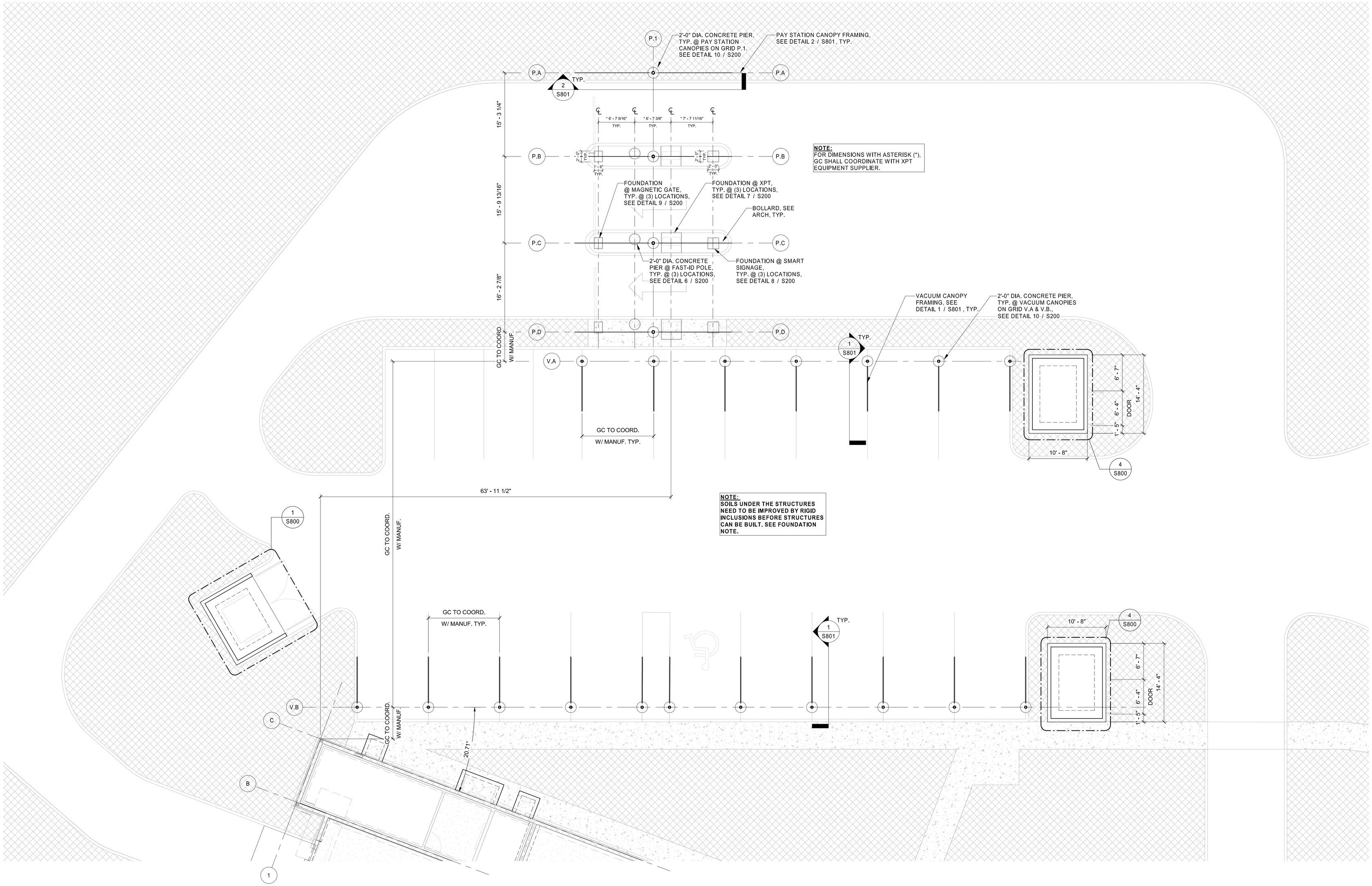
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SIGNATURE:
DATE: LICENSE NO. 50338
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TRENCH PLAN, ELEVATION AND DETAILS

SHEET: S101

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S-S101-TRENCH PLAN, ELEVATION AND DETAILS

5.2D - PLAN SET



1 SITE PLAN @ PAY STATION & VACUUM CANOPIES
1/8" = 1'-0"

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SIGNATURE:
DATE: 2024.01.11 08:14:56-06'00'
LICENSE NO. 50338

PAY STATION & VACUUM CANOPY PLAN

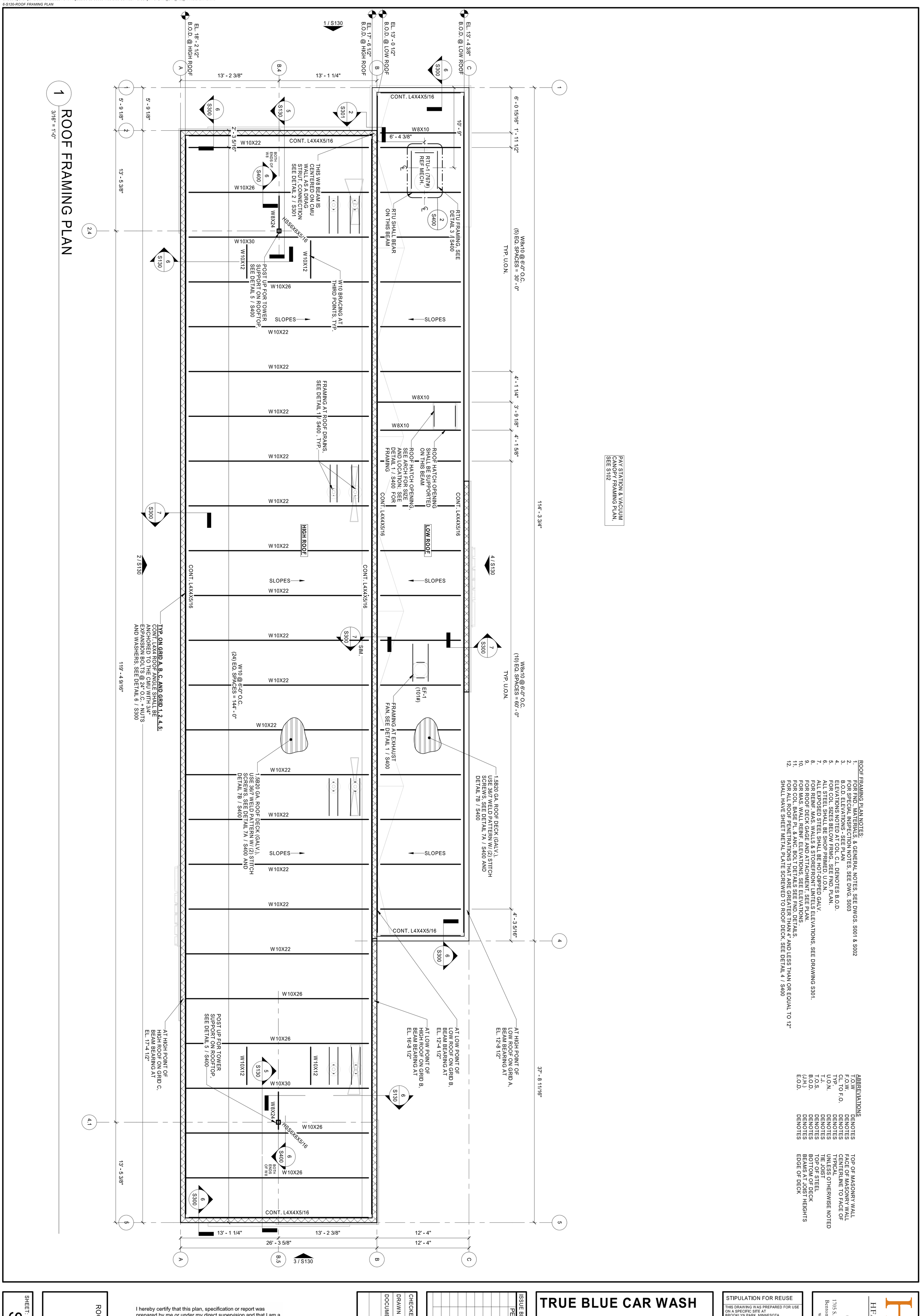
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4.3 S102 PAY STATION & VACUUM CANOPY PLAN

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6-S120-ROOF FRAMING PLAN

1 ROOF FRAMING PLAN

3/16" = 1'-0"



ROOF FRAMING PLAN NOTES:

1. FOR FND., MATERIALS, & GENERAL NOTES, SEE DWGS. S001 & S002
2. FOR SPECIAL INSPECTION NOTES, SEE DWG: S003
3. B.O.D. ELEVATIONS - SEE PLAN
4. ELEVATIONS NOTED AT COL. C.L. DENOTES B.O.D.
5. FOR COL SIZES BELOW FRMG, SEE FND. PLAN.
6. ALL STEEL SHALL BE SHOP PRIMED, U.O.N.
7. ALL EXPOSED STEEL SHALL BE HOT-DIPPED GALV.
8. FOR REINF. MAS. WALLS & STOREFRONT LINTELS ELEVATIONS, SEE DRAWING S301.
9. FOR ROOF DECK GAGE AND ATTACHMENT, SEE PLAN.
10. FOR MAS. WALL REINF. ELEVATIONS, SEE ELEVATIONS.
11. FOR COL BASE PL. & ANC. BOLT DETAILS SEE FND. DETAILS.
12. FOR ALL ROOF PENETRATIONS THAT ARE GREATER THAN 4" AND LESS THAN OR EQUAL TO 12" SHALL HAVE SHEET METAL PLATE SCREWED TO ROOF DECK. SEE DETAIL 4 / S400

ABBREVIATIONS

T.O.W	DENOTES	TOP OF MASONRY WALL
F.O.W.	DENOTES	FACE OF MASONRY WALL
CL TO F.O.	DENOTES	CENTERLINE TO FACE OF
TYP.	DENOTES	TYPICAL
U.O.N.	DENOTES	UNLESS OTHERWISE NOTED
T.J.	DENOTES	TIE JOIST
T.O.S.	DENOTES	TOP OF STEEL
B.O.D.	DENOTES	BOTTOM OF DECK
(J.H.)	DENOTES	BEAMS AT JOIST HEIGHTS
E.O.D.	DENOTES	EDGE OF DECK

SHEET: S120

ROOF FRAMING PLAN

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DRAWN BY:	YJN
DOCUMENT DATE:	01/10/24

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PERMIT	01/10/24

TRUE BLUE CAR WASH

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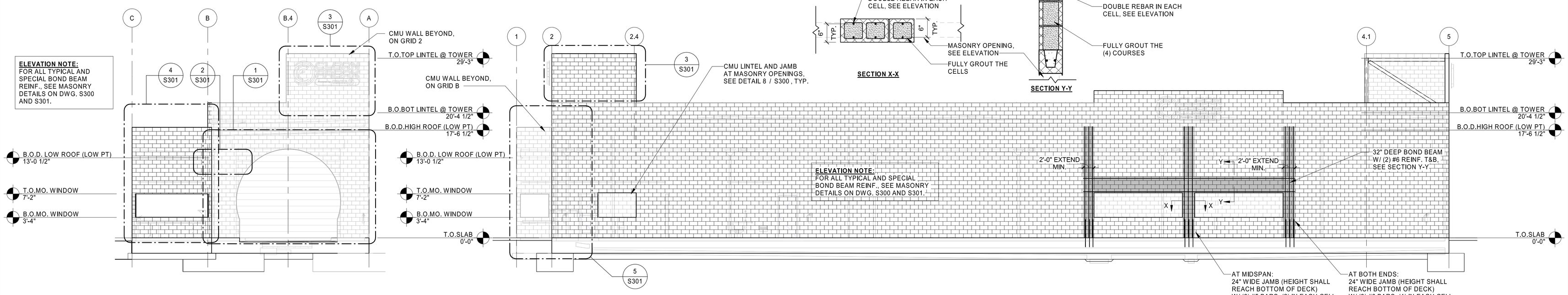
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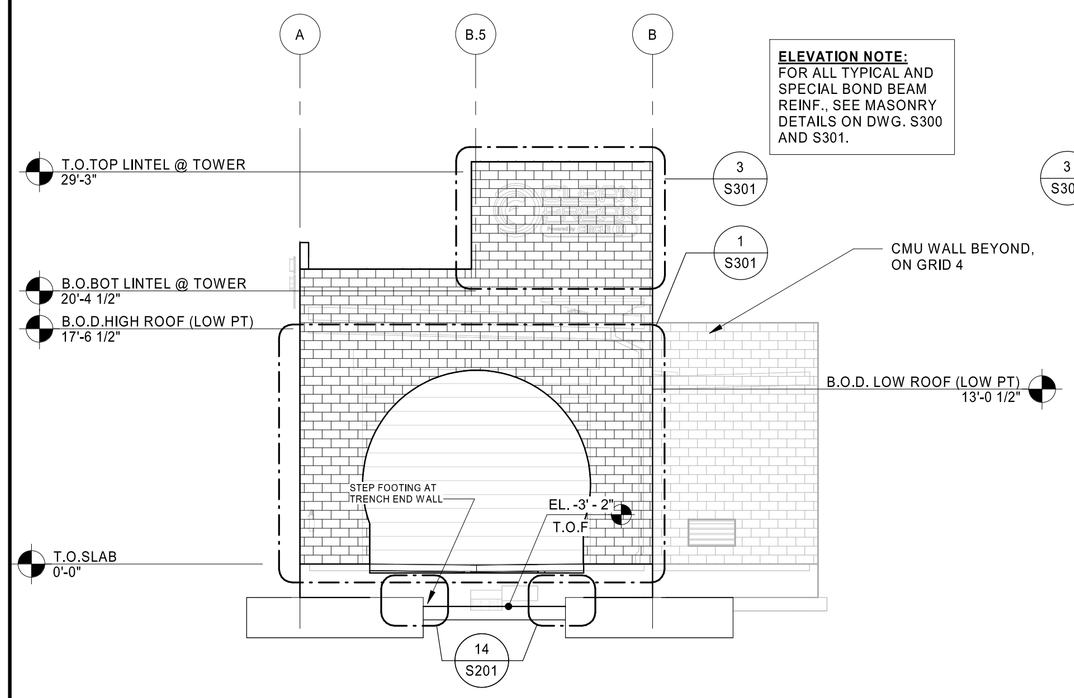
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5.2D - PLAN SET

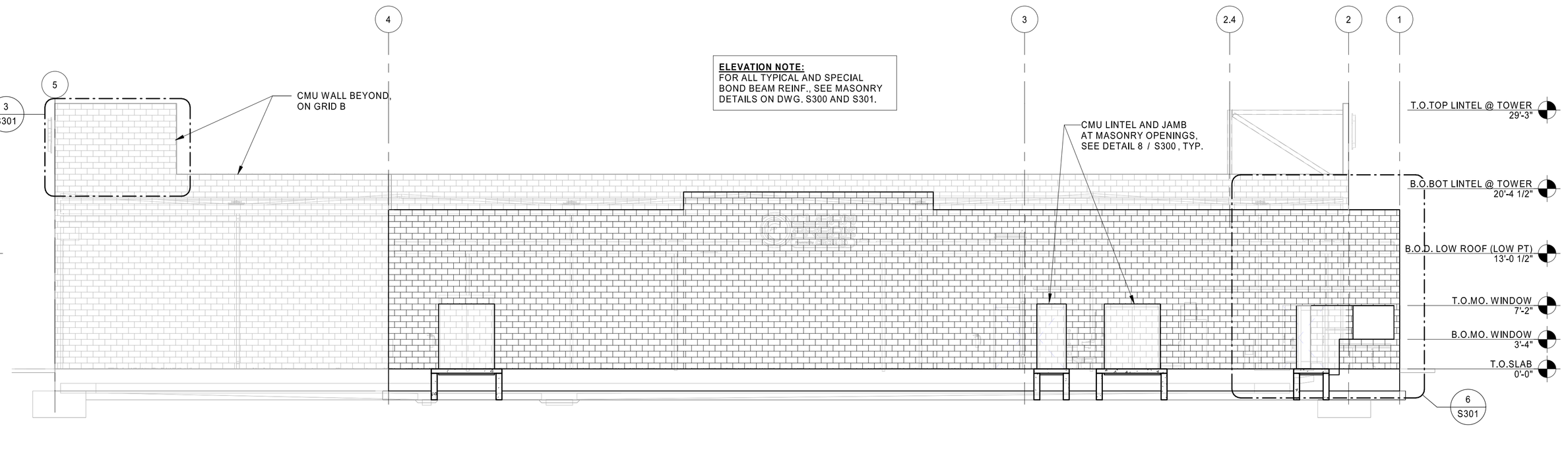


1 ENTRANCE ELEVATION
1/8" = 1'-0"

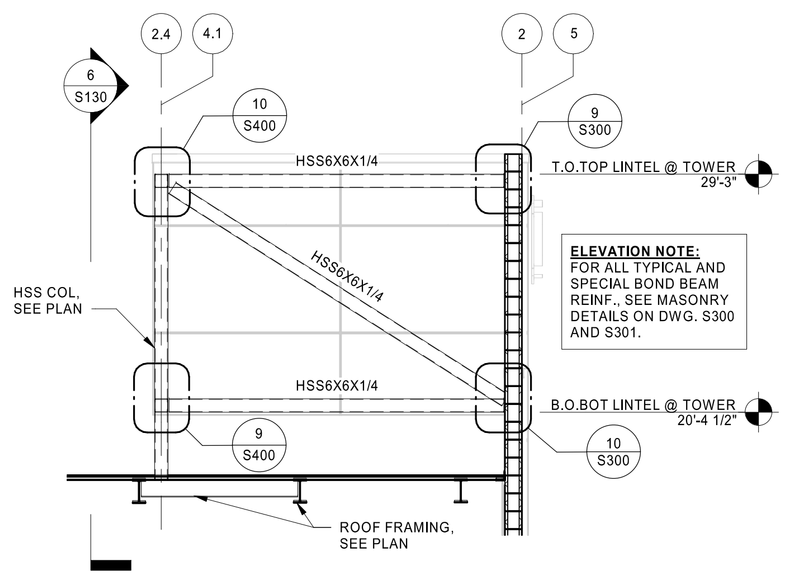
2 EXTERIOR ELEVATION
1/8" = 1'-0"



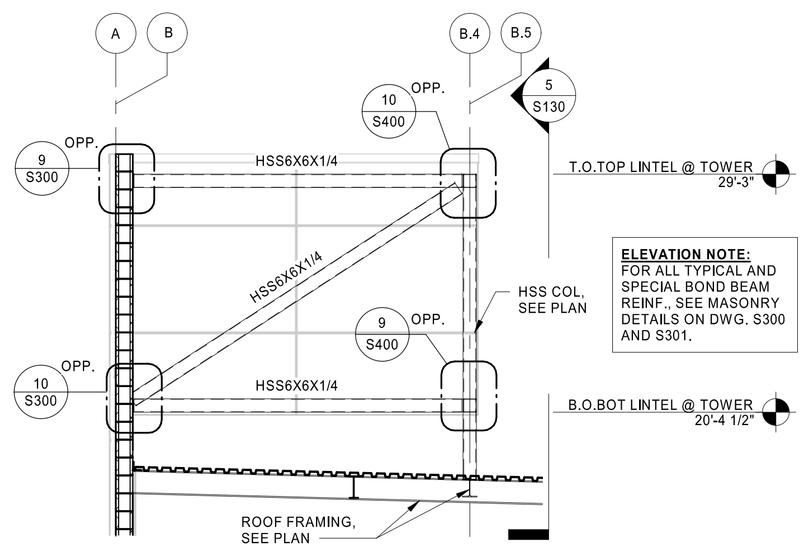
3 EXIT ELEVATION
1/8" = 1'-0"



4 EXTERIOR ELEVATION
1/8" = 1'-0"



5 ELEVATION @ TOWER BRACE
1/4" = 1'-0"



6 ELEVATION @ TOWER BRACE
1/4" = 1'-0"

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	GGB
DRAWN BY:	YJN
DOCUMENT DATE:	01/10/24

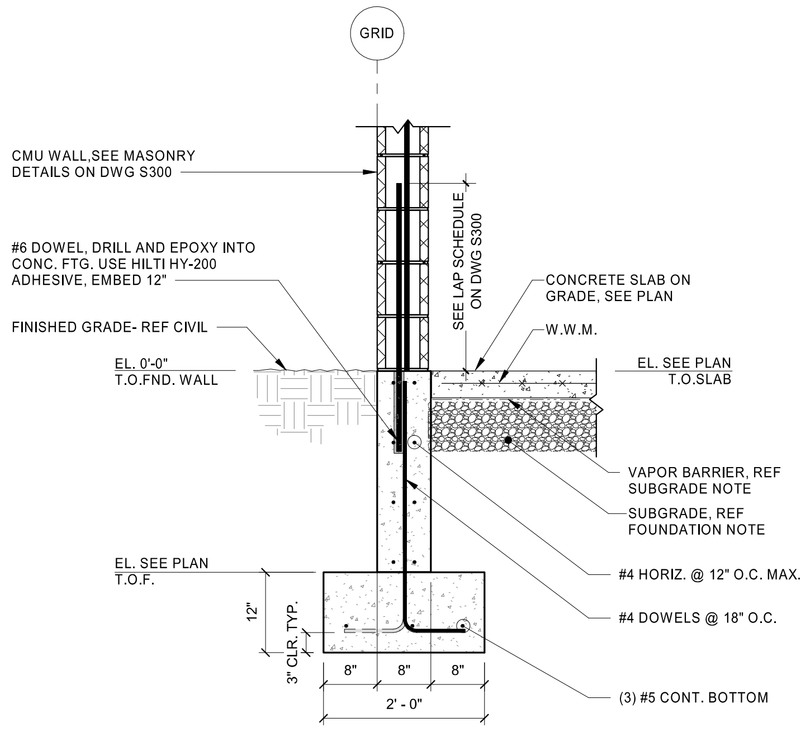
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
PRINT NAME: LUKE HEN TSAO
SIGNATURE:
DATE: 2024.01.11 08:15:08-06'00'
LICENSE NO. 50338

STRUCTURAL ELEVATIONS

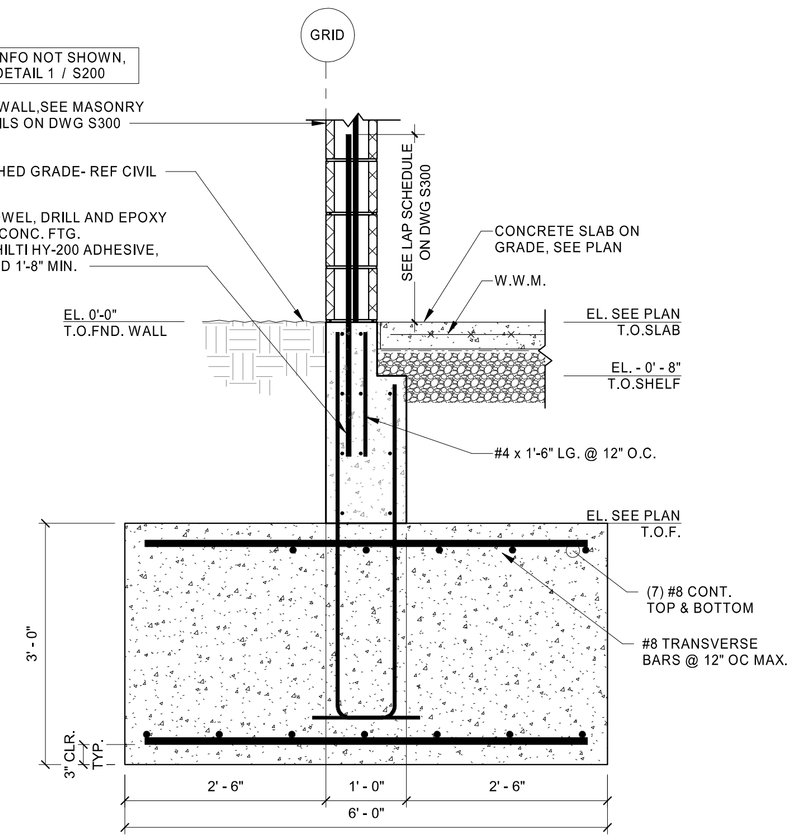
SHEET: S130

1/10/2024 6:45:46 PM
C:\Users\jsaun.yan\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_STR_V22_HFA.Jaxon.Yan.rvt
FILE: S130-STRUCTURAL ELEVATIONS

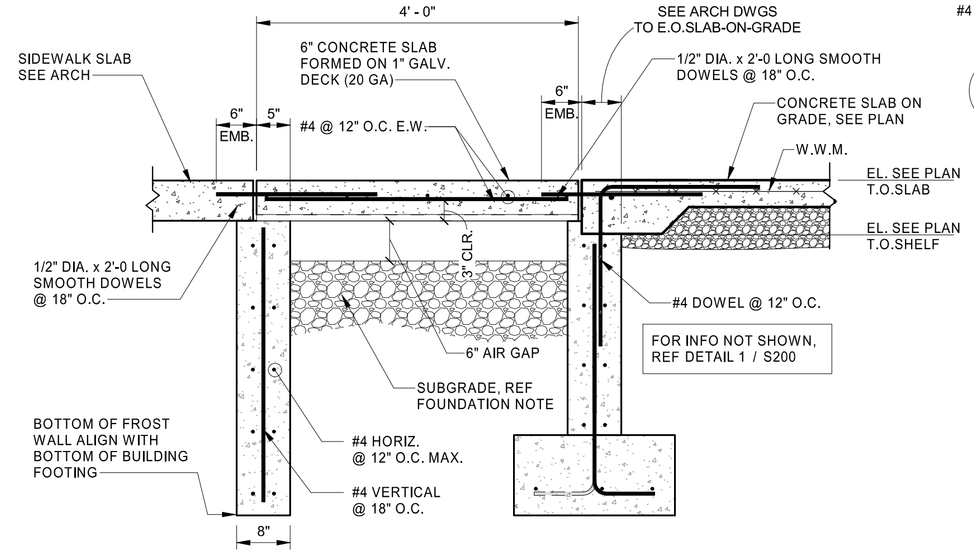
5.2D - PLAN SET



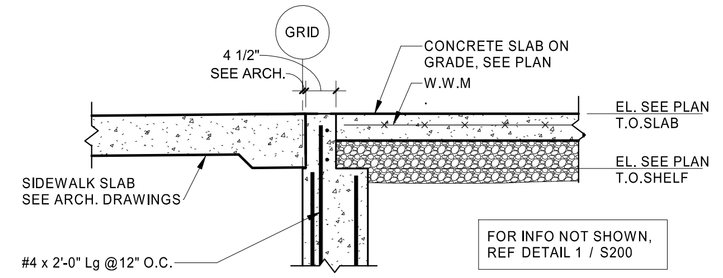
1 SECTION @ TYPICAL WALL
3/4" = 1'-0"



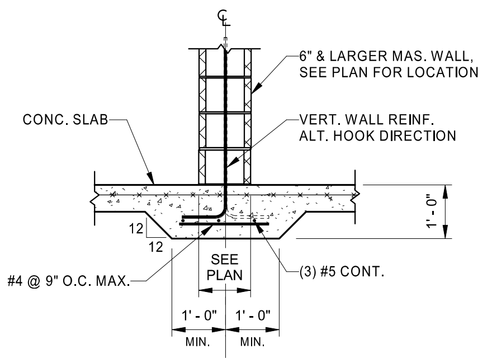
2 SECTION @ SHEAR WALL
3/4" = 1'-0"



3 SECTION @ MAN DOOR
3/4" = 1'-0"



4 SECTION @ STOREFRONT
3/4" = 1'-0"



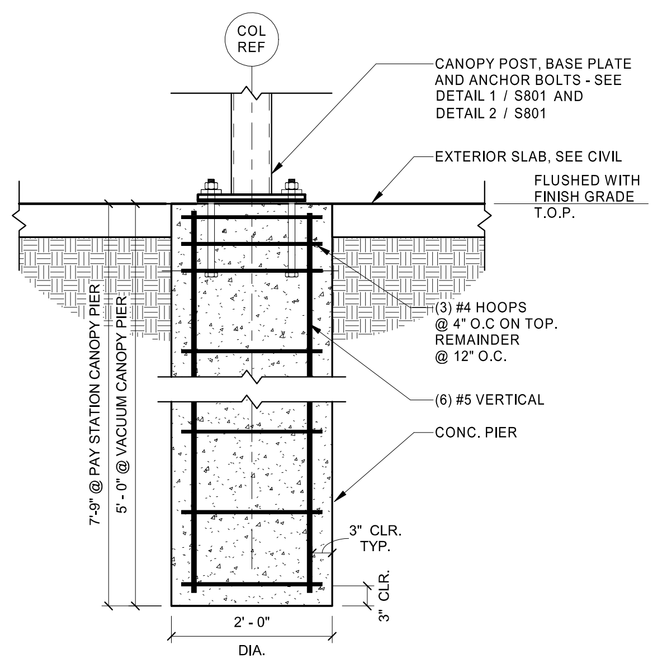
5 THICKEN SLAB AT NON-LOAD BEARING CMU WALL
1/2" = 1'-0"

6 XPT - FAST ID POLE FOUNDATION
3/4" = 1'-0"

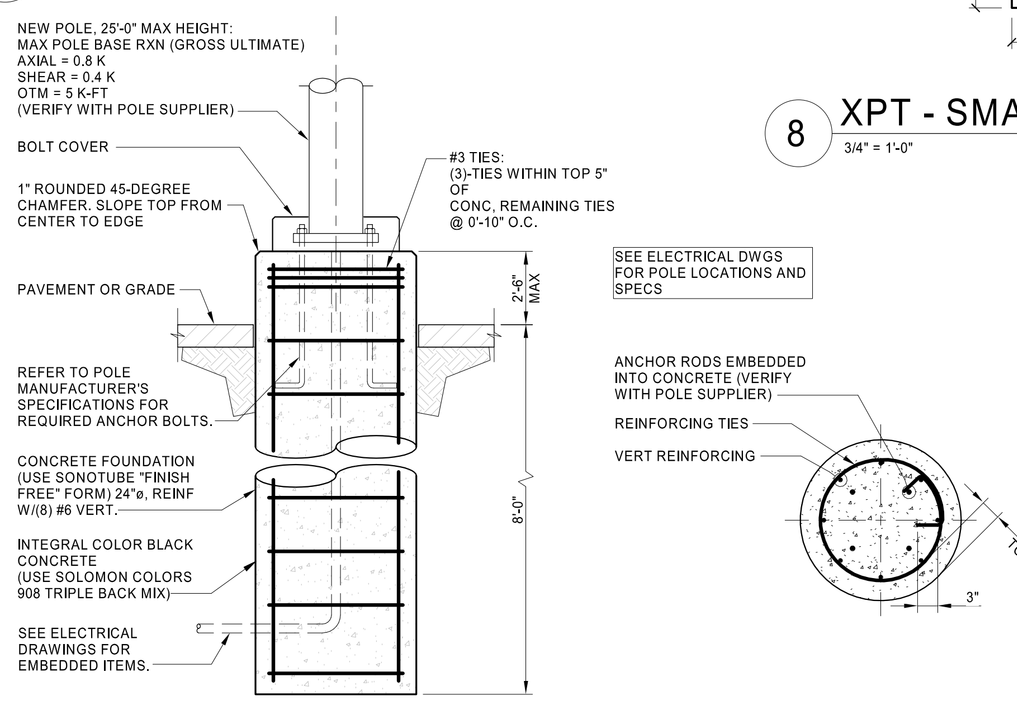
7 XPT UNDERCUT FOUNDATION
3/4" = 1'-0"

8 XPT - SMART SIGNAGE FOUNDATION
3/4" = 1'-0"

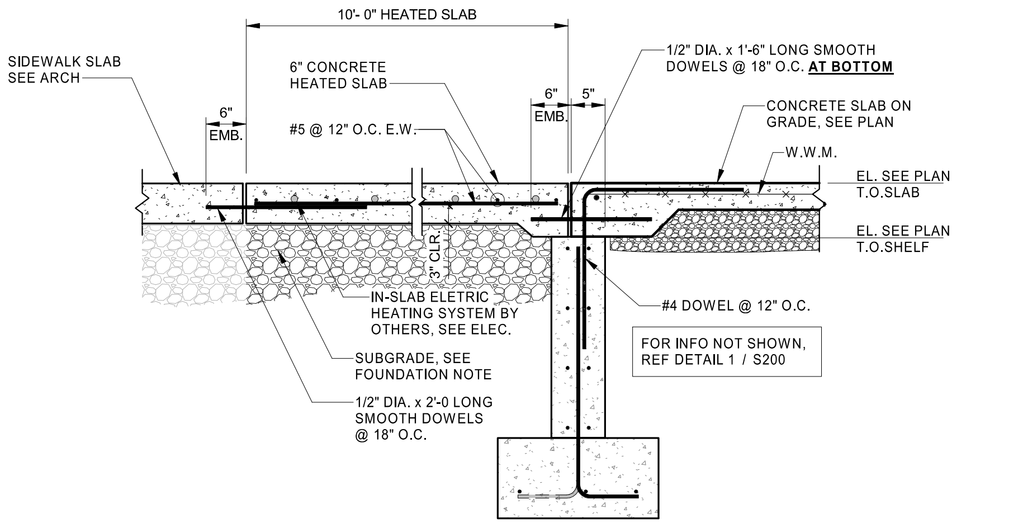
9 XPT - MAGNETIC GATE FOUNDATION
3/4" = 1'-0"



10 PAY STATION & VACUUM CANOPY FTG
3/4" = 1'-0"



11 TYP LIGHT POLE BASE
3/4" = 1'-0"



12 SECTION @ TUNNEL DOOR
3/4" = 1'-0"

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

CHECKED BY:	GGB
DRAWN BY:	YJN
DOCUMENT DATE:	01/10/24

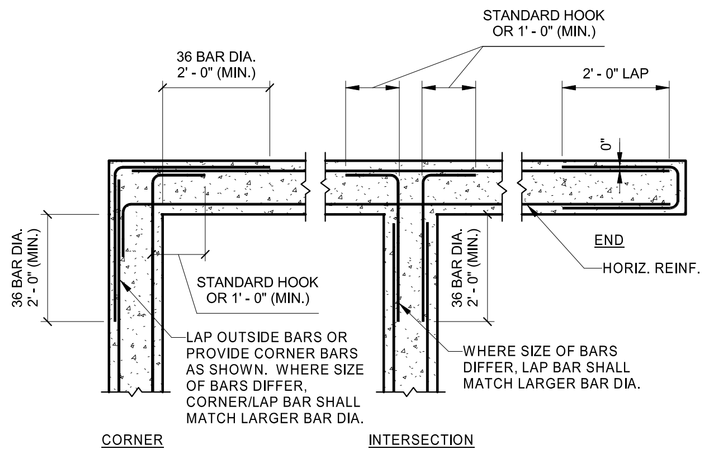
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
PRINT NAME: LUCAS M. TAO
SIGNATURE:
DATE: 2024.01.11 08:15:14-06'00'
LICENSE NO. 50338

FOUNDATION DETAILS

SHEET: S200

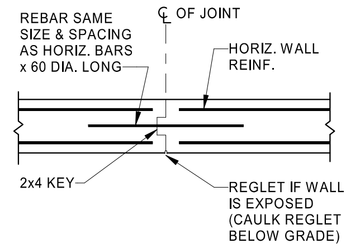
1/10/2024 6:33:46 PM
C:\Users\jlaman.yan\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_STR_V22_HFA.Jaman.Yan.rvt
6-23-80005-FOUNDATION DETAILS

5.2D - PLAN SET



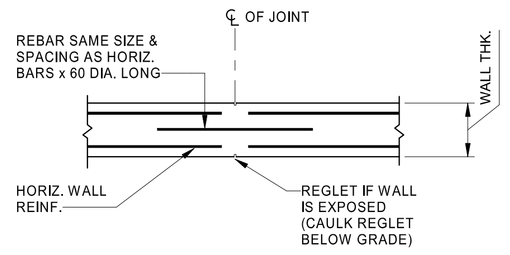
1 FND. WALL PLAN DETAIL OF HORIZ. REINF.

1/2" = 1'-0"



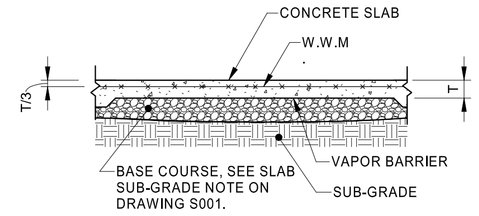
2A FND. WALL CONSTR. JOINT DETAIL

1/2" = 1'-0"



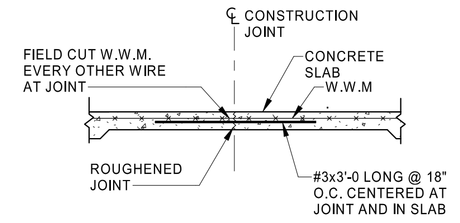
2B FND. WALL CONTROL JOINT DETAIL

1/2" = 1'-0"



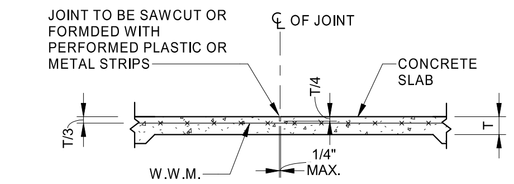
3 SLAB CONSTRUCTION

1/2" = 1'-0"



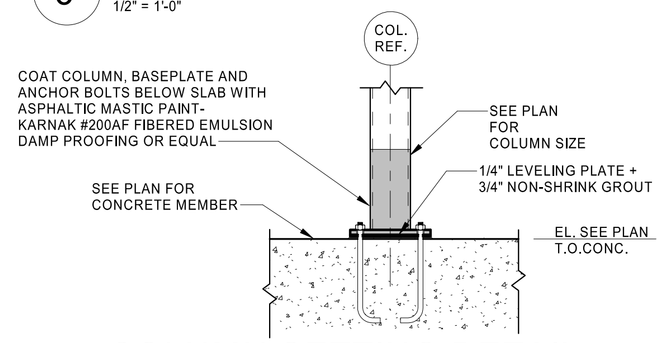
4 SLAB CONSTRUCTION JOINT

1/2" = 1'-0"



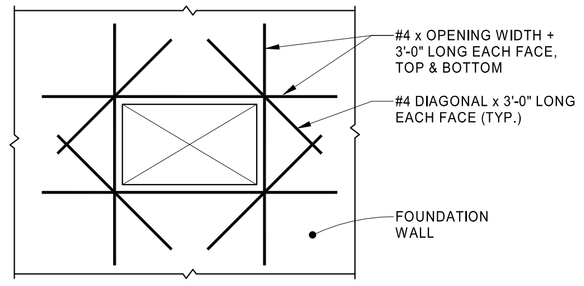
5 SLAB CONTROL JOINT

1/2" = 1'-0"



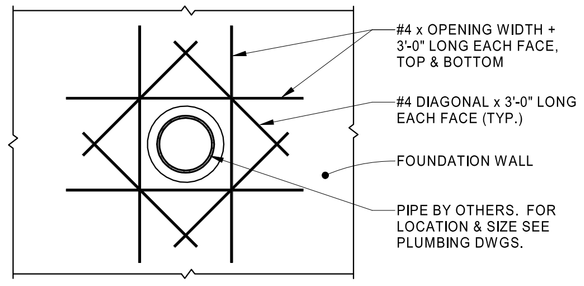
6 COLUMN SETTING DETAIL

3/4" = 1'-0"



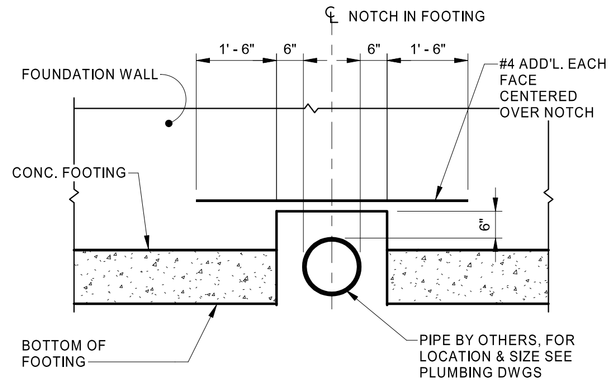
7 FND WALL BOX-OUT REINF.

1/2" = 1'-0"



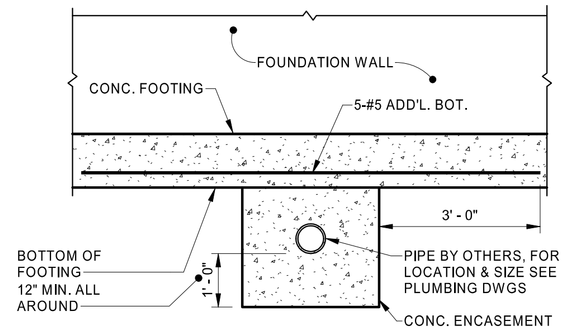
8 FND WALL PIPE SLEEVE REINF.

1/2" = 1'-0"



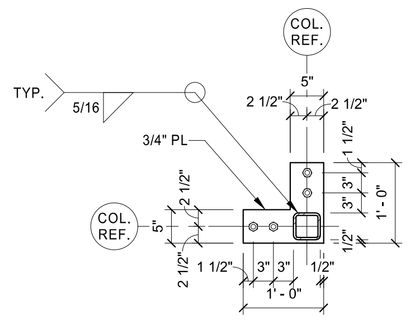
9 PIPE NOTCH FOOTING

1/2" = 1'-0"



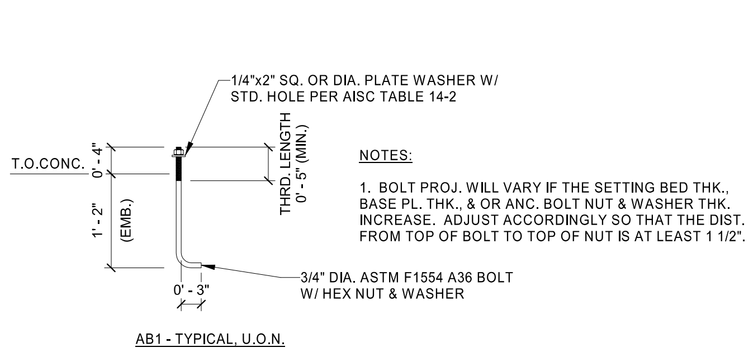
10 CONCRETE ENCASEMENT OF PIPE(S) BELOW FOOTING

1/2" = 1'-0"



11 BASE PL - BP1

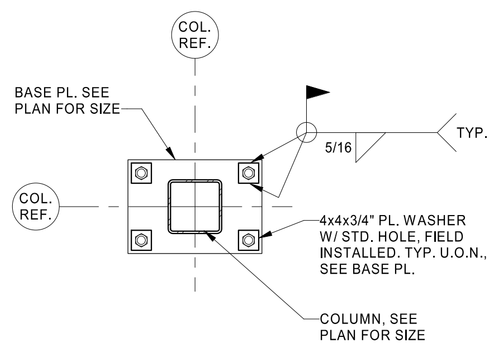
3/4" = 1'-0"



AB1 - TYPICAL, U.O.N.

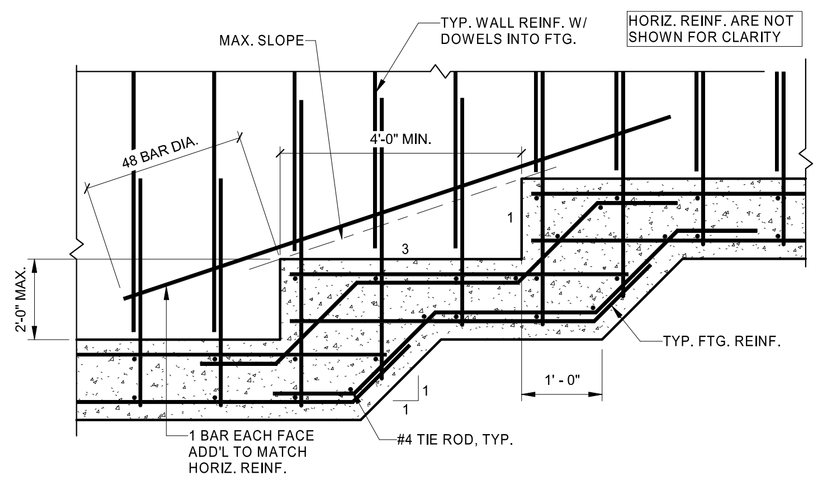
12 ANCHOR BOLT - AB1

3/4" = 1'-0"



13 PLATE WASHER DETAIL

N.T.S.



14 FND. STEP FTG. DETAIL

3/4" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	GGB
DRAWN BY:	YJN
DOCUMENT DATE:	01/10/24

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

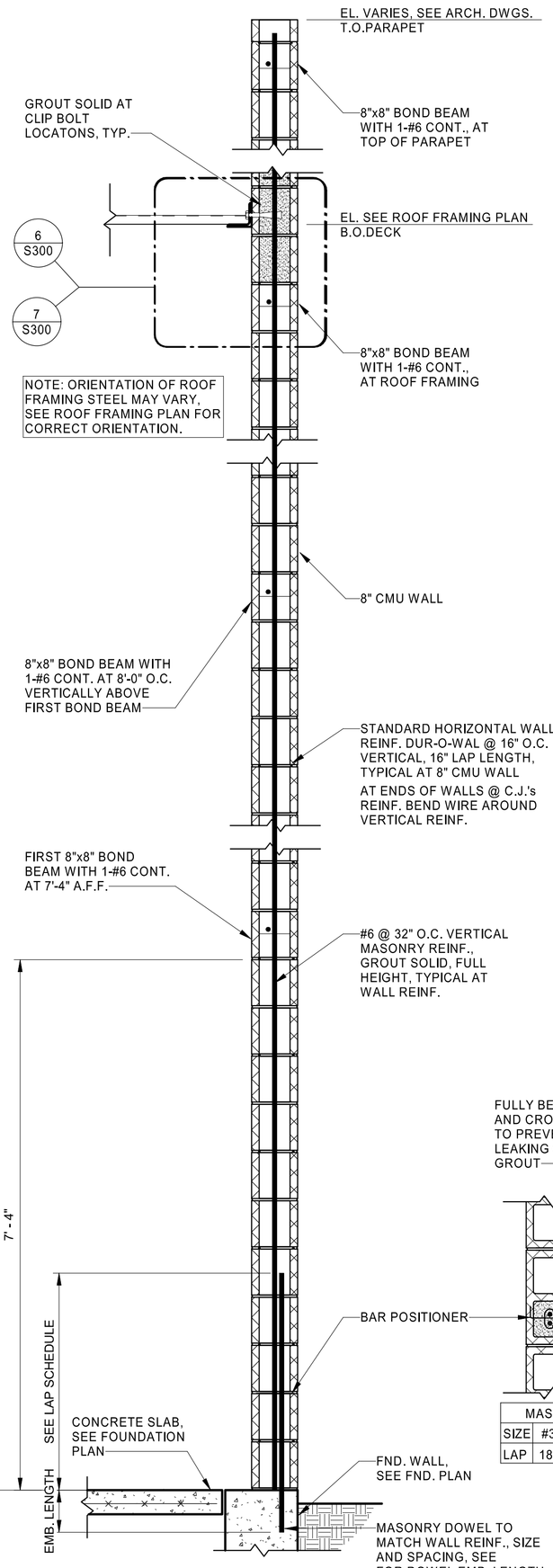
PRINT NAME: LUKASZ TYLKO
SIGNATURE:
DATE: LICENSE NO. 50338
2024.01.11 08:15:20-06'00'

FOUNDATION DETAILS

SHEET: S201

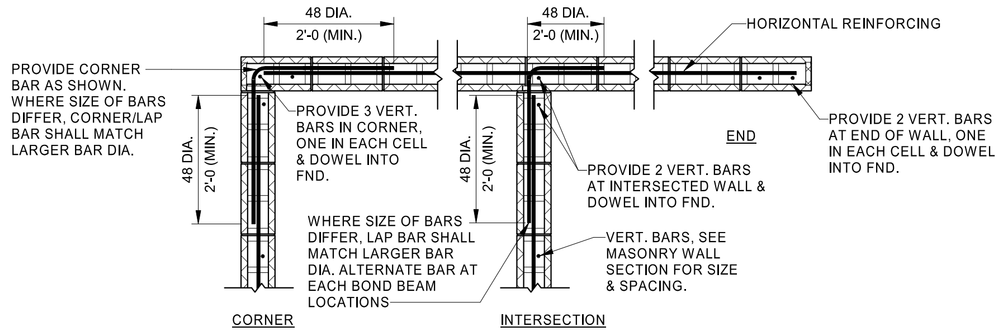
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C:\Users\jmaas.yan\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_STR_V22_HFA_Jamas.Yan.rvt
3.5291F4QUNIATION (DETAILS

5.2D - PLAN SET

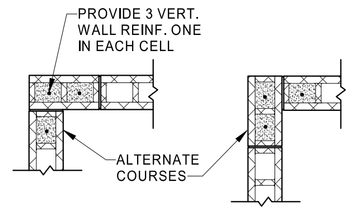


MASONRY REBAR LAP SCHEDULE							
SIZE	#3	#4	#5	#6	#7	#8	#9
LAP	18"	24"	30"	36"	42"	48"	54"

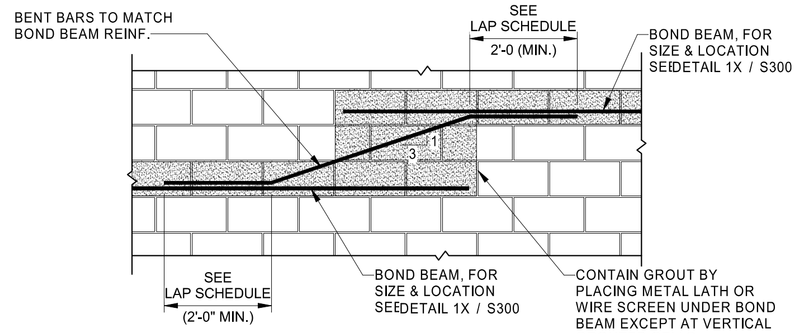
1 TYPICAL 8" CMU WALL SECTION
3/4" = 1'-0"



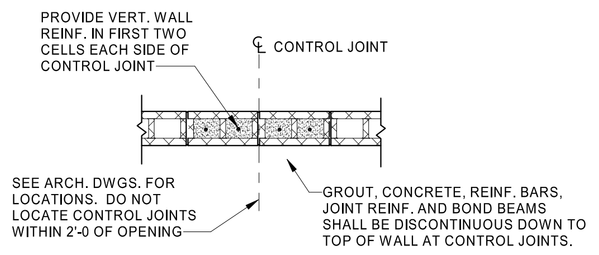
2 PLAN DETAIL OF HORIZ. REINF. AT 8" CMU BOND BEAM
1/2" = 1'-0"



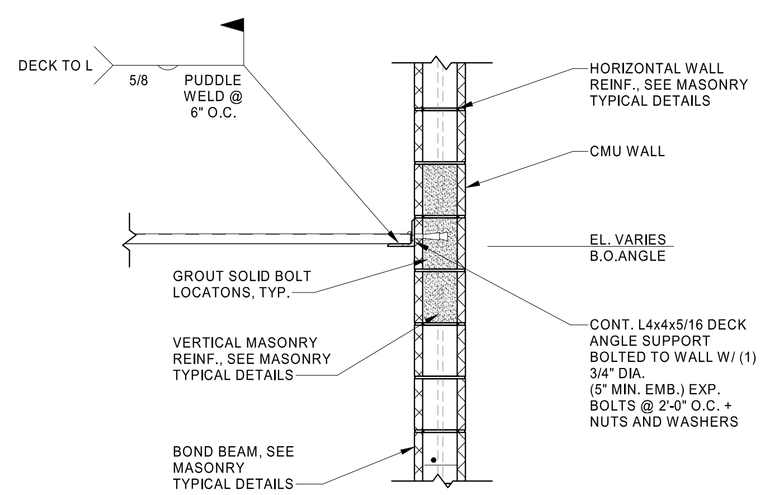
3 TYPICAL CMU WALL CORNER DETAIL
1/2" = 1'-0"



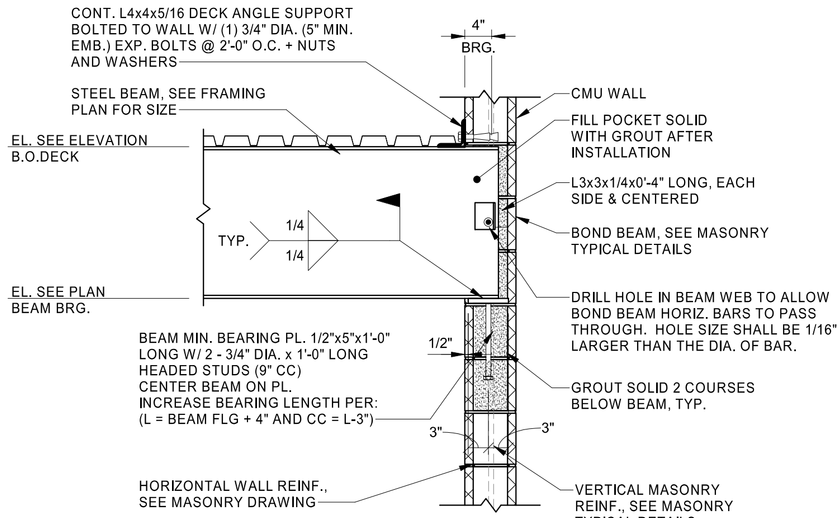
4 TYPICAL BOND BEAM STEP DETAIL
1/2" = 1'-0"



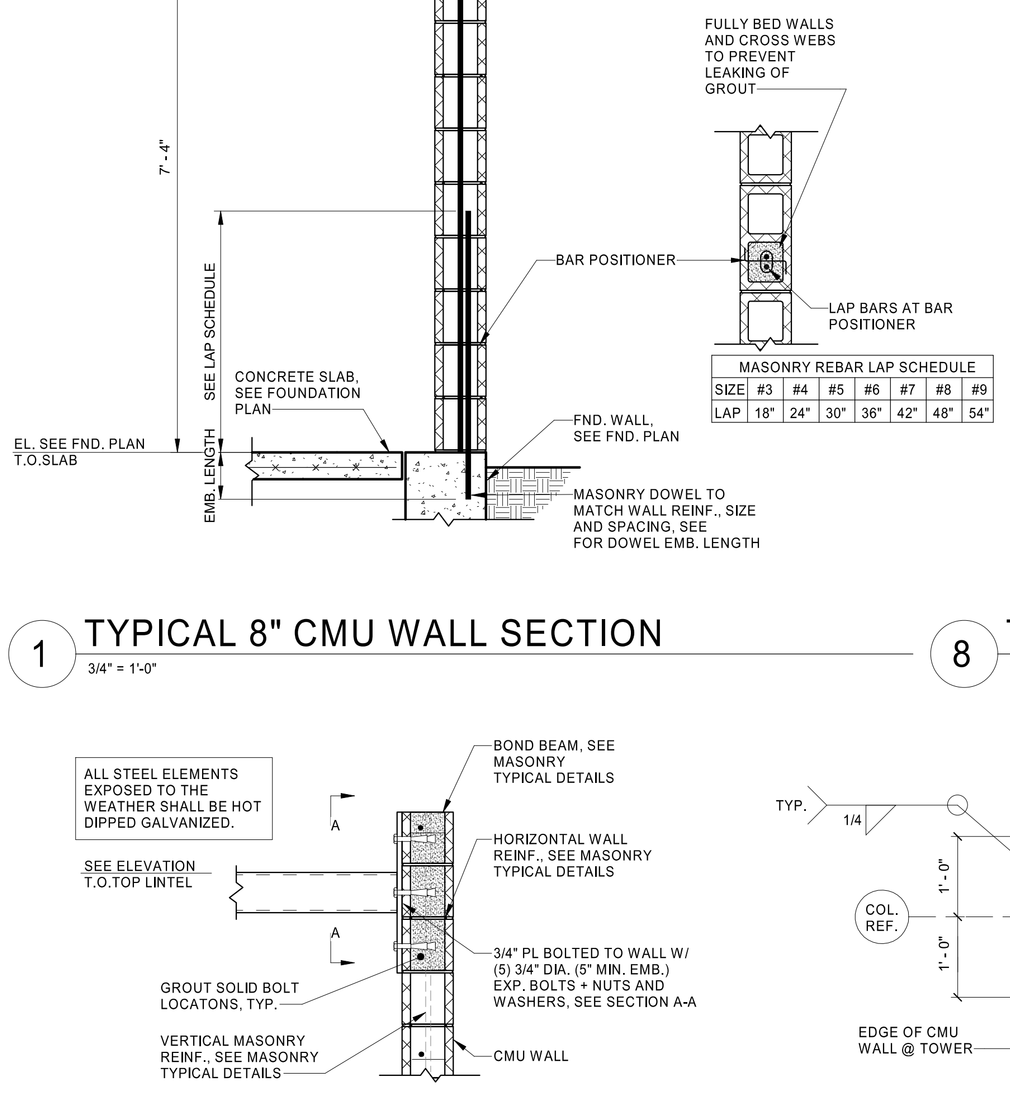
5 TYPICAL CMU WALL VERTICAL CONTROL JOINT DETAIL
1/2" = 1'-0"



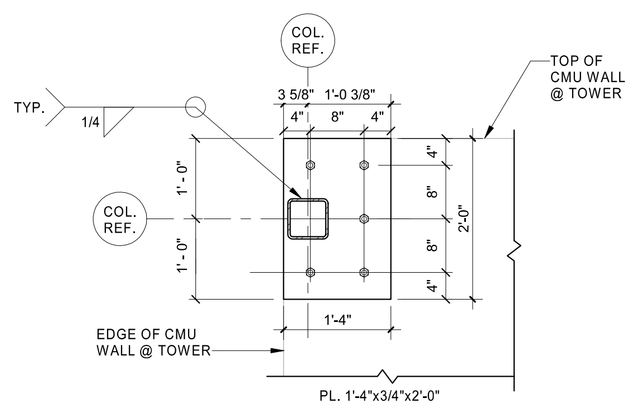
6 DECK ANGLE SUPPORT DETAIL
3/4" = 1'-0"

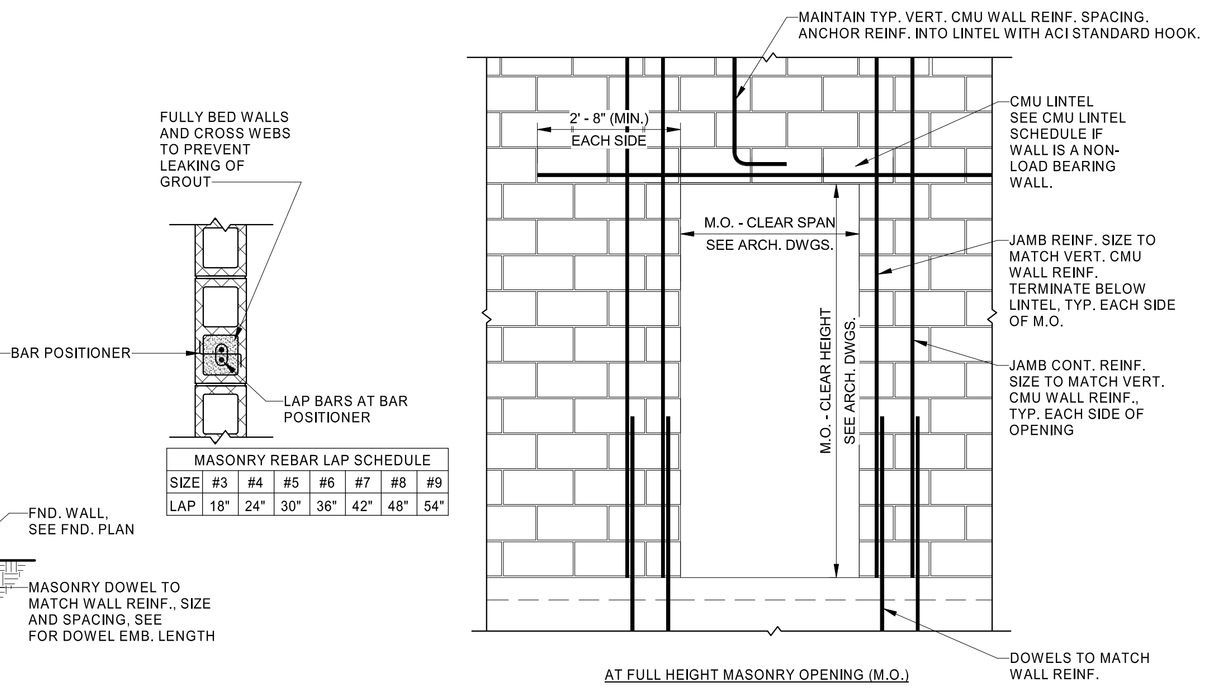


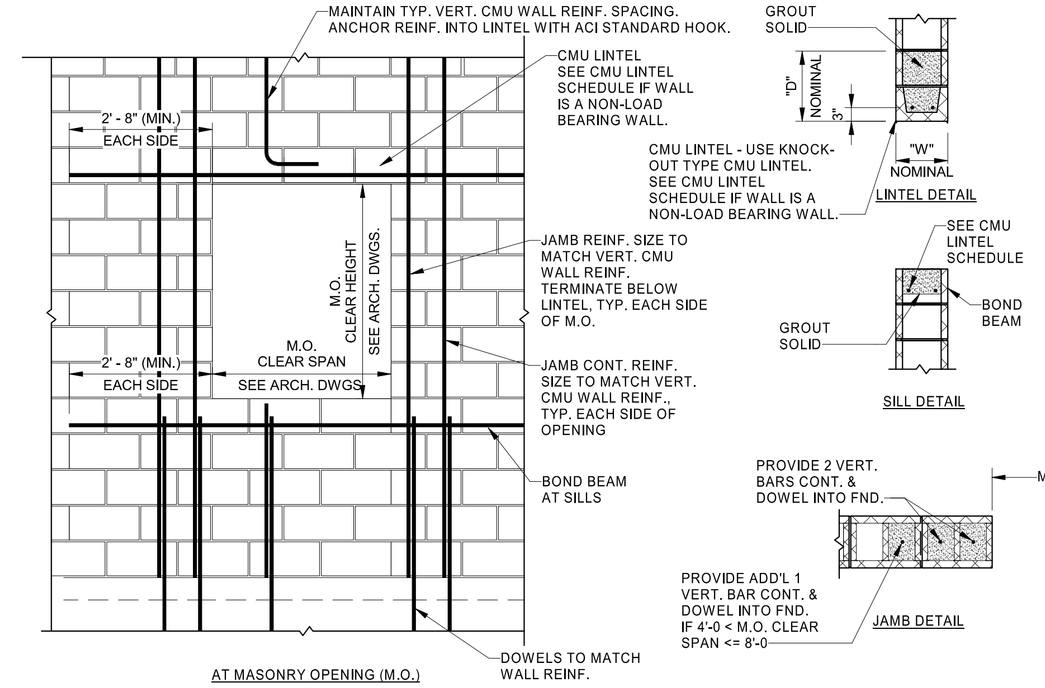
7 BEAM BEARING DETAIL
3/4" = 1'-0"



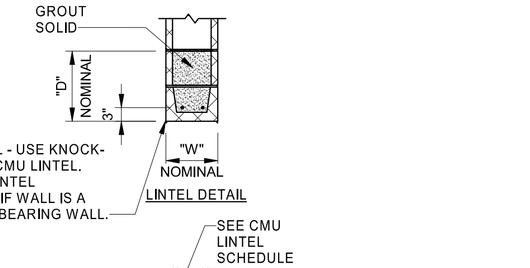
9 HSS CONN. TO MAS. WALL @ TOWER TOP BRACE
3/4" = 1'-0"

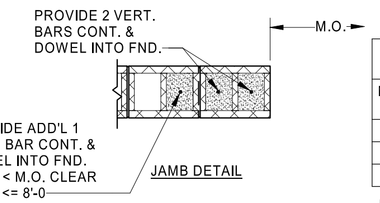






8 TYPICAL CMU MASONRY OPENING (M.O.) WITH CMU LINTEL
1/2" = 1'-0"

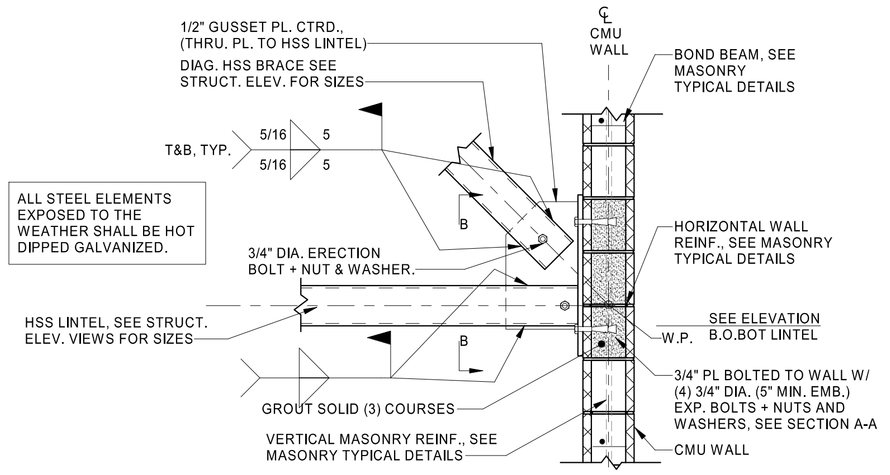




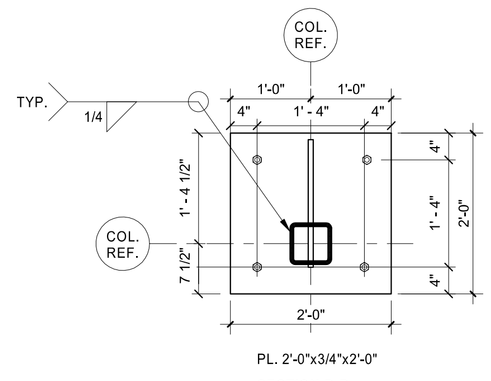
CMU LINTEL SCHEDULE FOR NON-LOAD BEARING CMU WALL			
MAXIMUM M.O.	8" THICK CMU WALL	10" THICK CMU WALL	12" THICK CMU WALL
4'-0	8"x8" W/2-#4	10"x8" W/2-#4	12"x8" W/2-#4
8'-0	8"x16" W/2-#5	10"x16" W/2-#4	12"x16" W/2-#5
12'-0	8"x24" W/2-#5 T&B	10"x24" W/2-#5	12"x24" W/2-#5

NOTES:
1. LINTEL SIZE = "W"x"D" = NOMINAL WIDTH x NOMINAL DEPTH

8A CMU LINTEL SCHEDULE
1/2" = 1'-0"



10 HSS CONN. TO MAS. WALL @ TOWER BOT. BRACE
3/4" = 1'-0"



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BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

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DRAWN BY:	YJN
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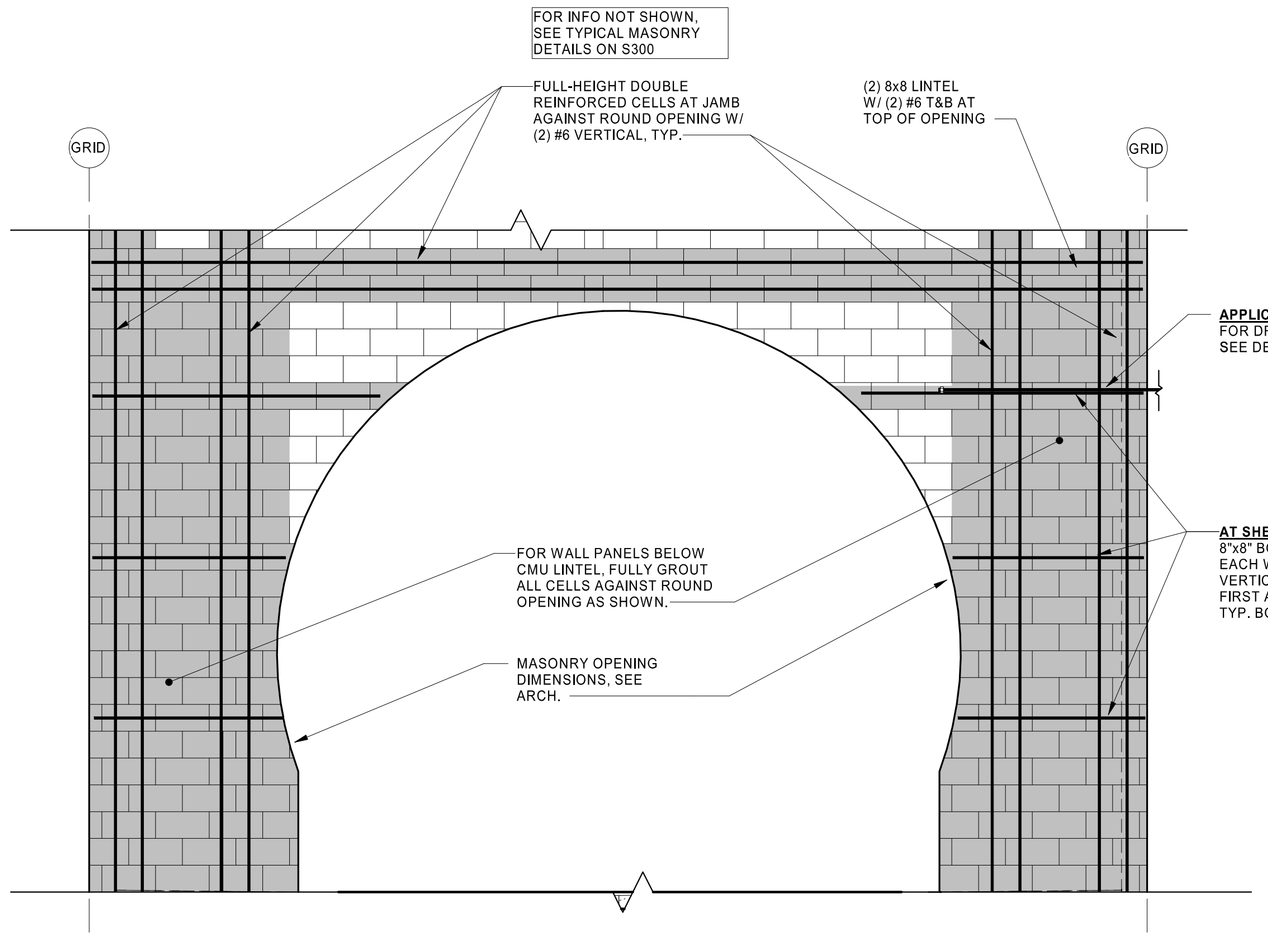
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
PRINT NAME: LUNSEN TSAO
SIGNATURE:
LICENSE NO.: 50338
DATE: 2024.01.11 08:15:26-06'00'

MASONRY DETAILS

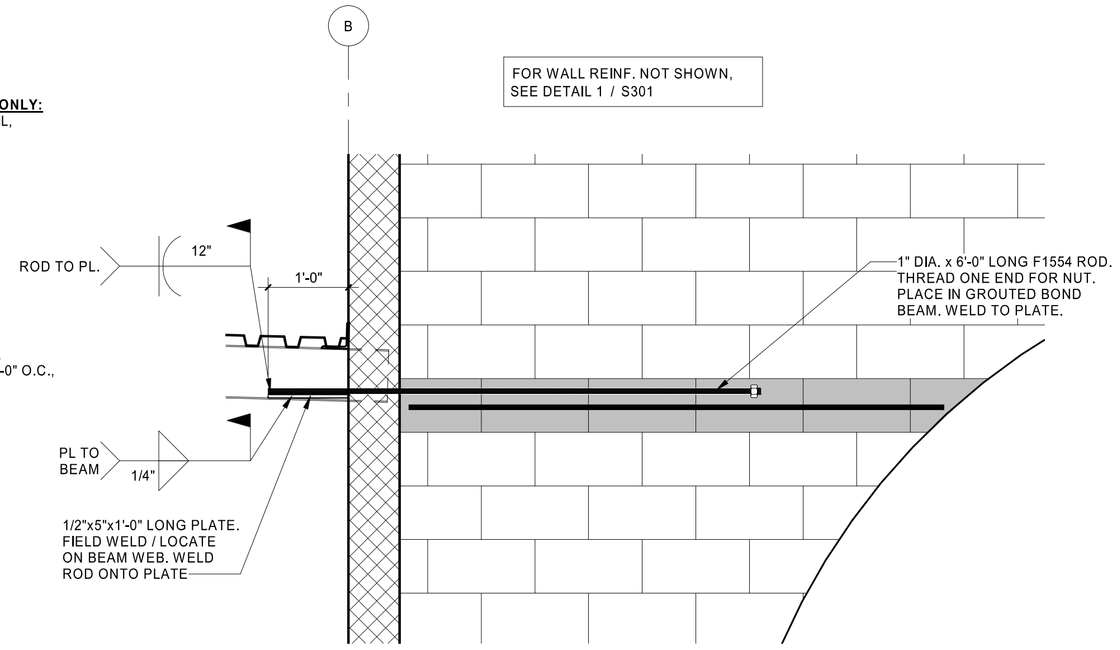
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05-S300-MASONRY DETAILS

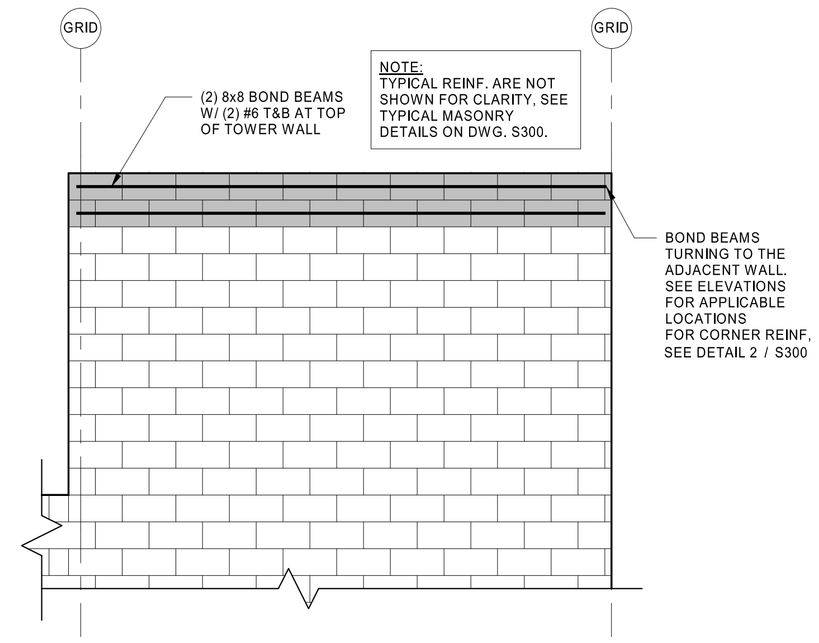
5.2D - PLAN SET



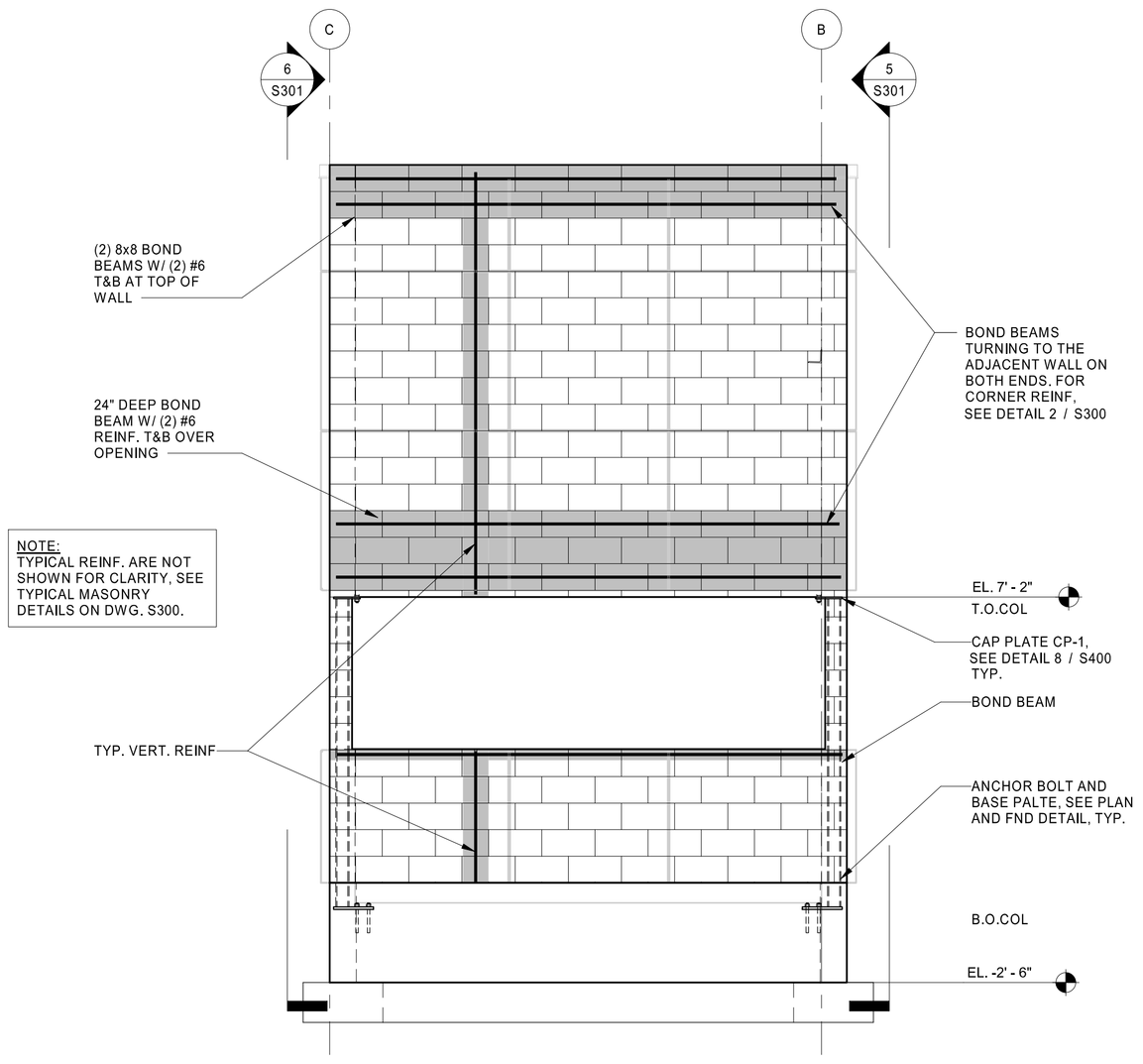
1 MAS. SHEAR WALL REINFORCEMENT
3/8" = 1'-0"



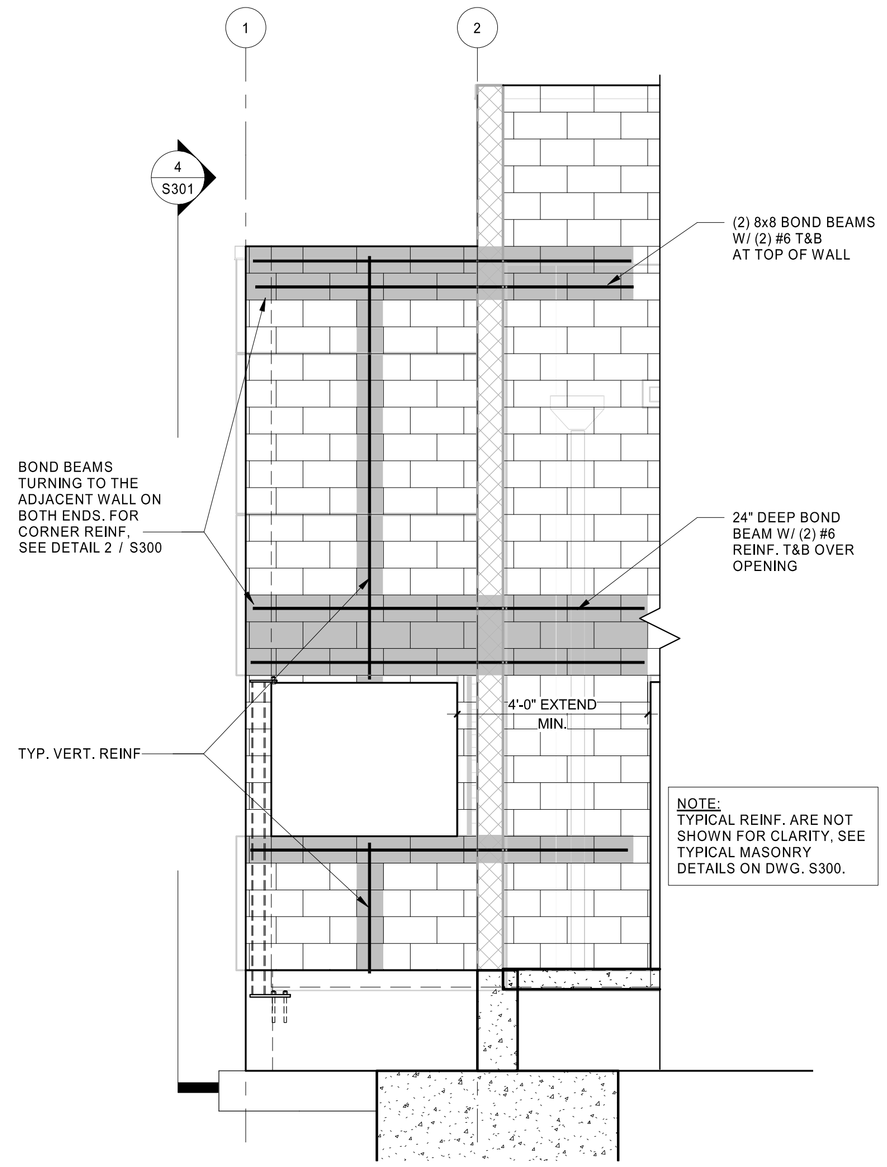
2 DRAG STRUCT REINFORCEMENT
3/4" = 1'-0"



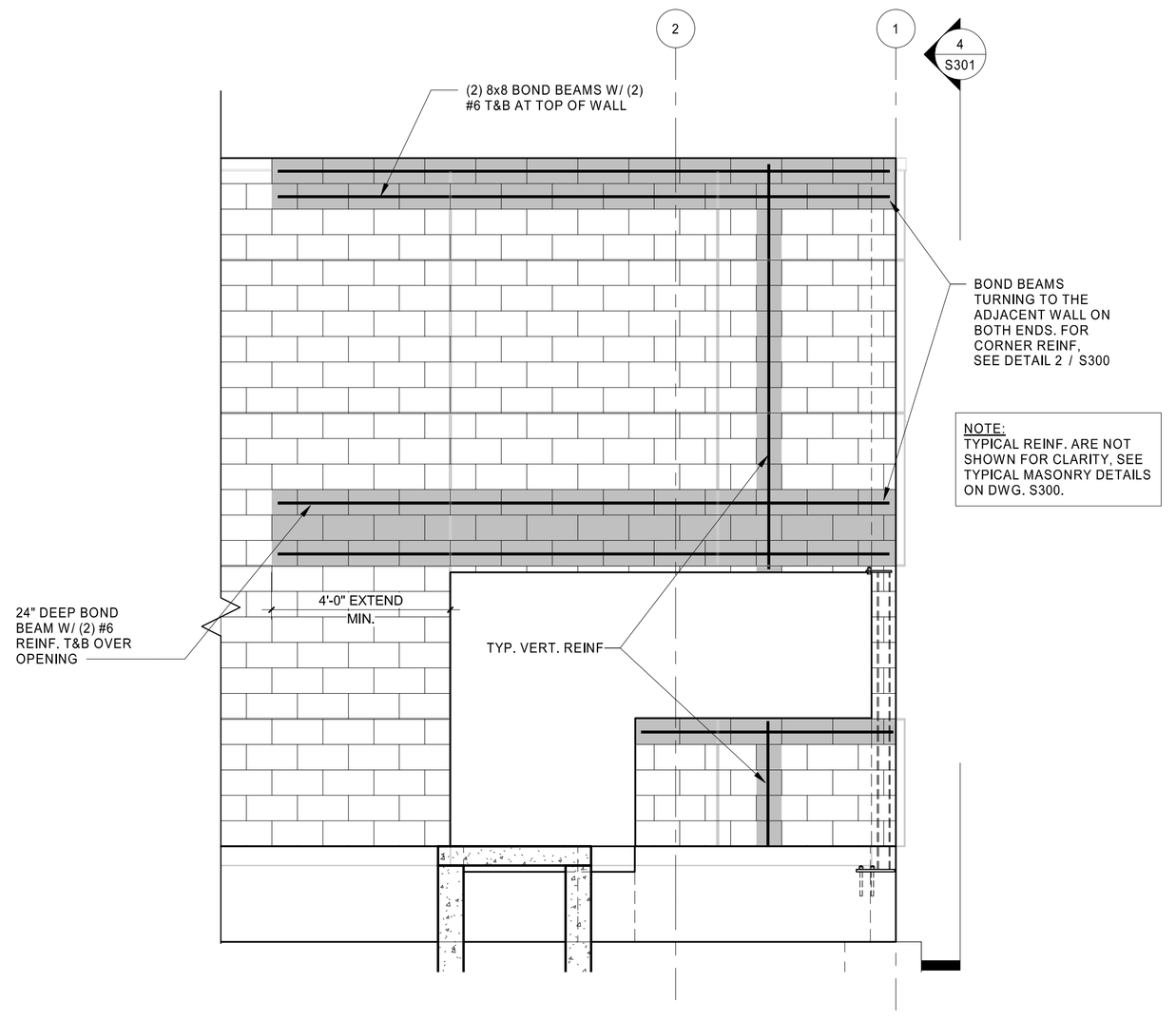
3 MAS. REINFORCEMENT @ TOWER
3/8" = 1'-0"



4 MAS. REINFORCEMENT @ BUMPOUT
3/8" = 1'-0"



5 MAS. REINFORCEMENT @ BUMPOUT
3/8" = 1'-0"



6 MAS. REINFORCEMENT @ BUMPOUT
3/8" = 1'-0"

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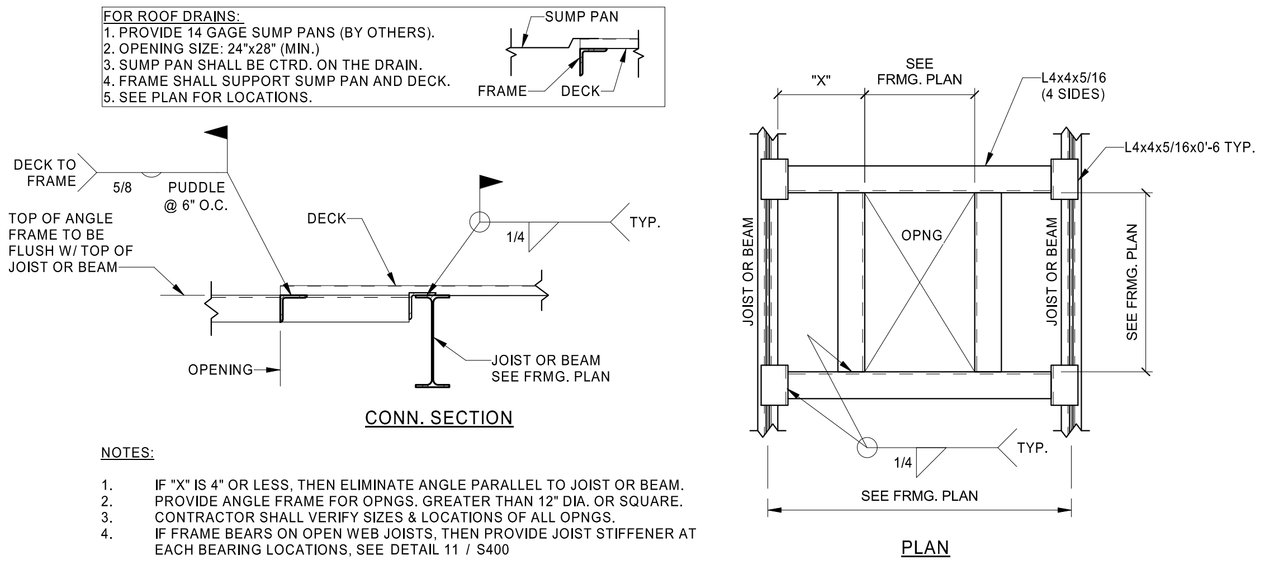
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MASONRY DETAILS

SHEET: S301

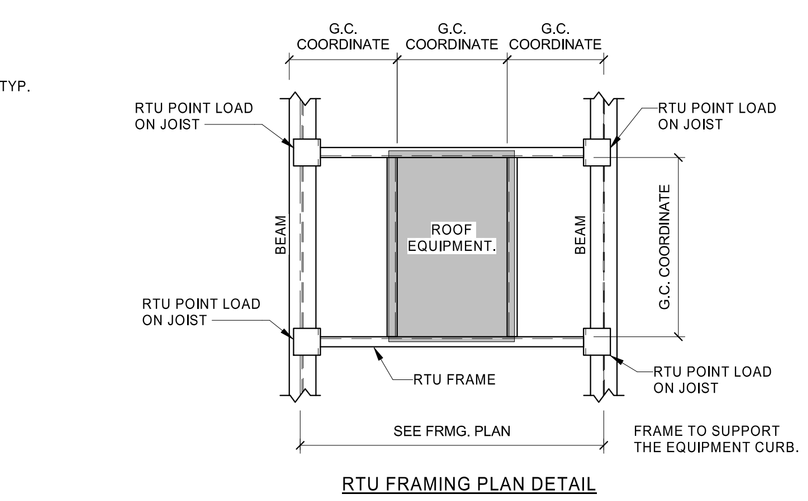
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C:\Users\jonan.yan\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_STR_V22_HFA.Jonan.Yan.rvt
11-S301-MASONRY DETAILS

5.2D - PLAN SET



1 ROOF HATCH, ROOF DRAIN & MECH. EXHAUST FANS, & ROOF OPNG. FRMG. DETAIL

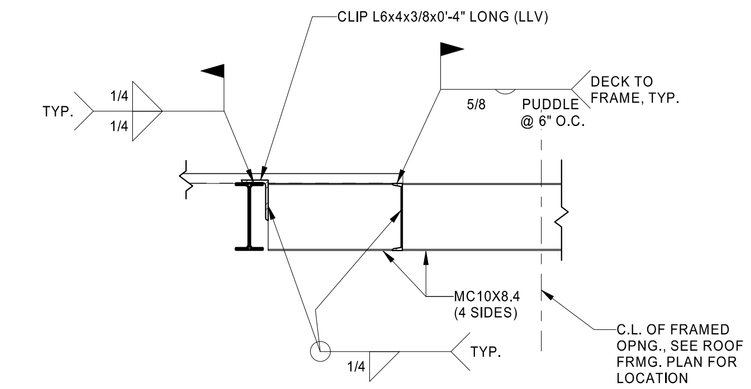
3/4" = 1'-0"



RTU FRAMING PLAN DETAIL

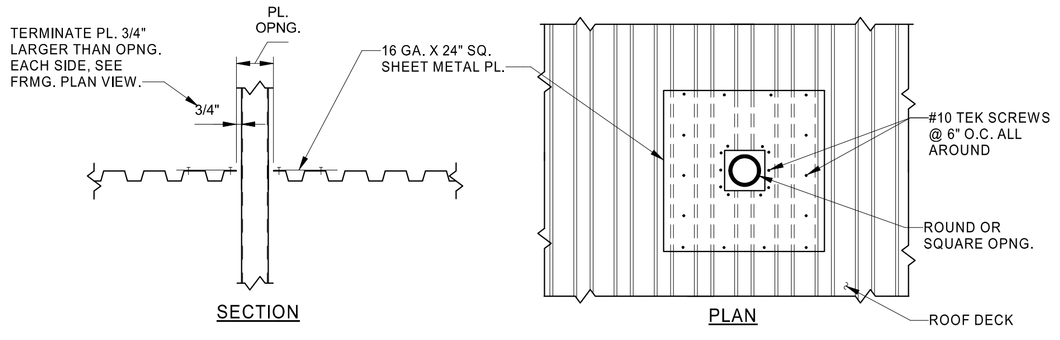
2 RTU FRAMING PLAN DETAIL

3/4" = 1'-0"



3 RTU FRAME DETAIL

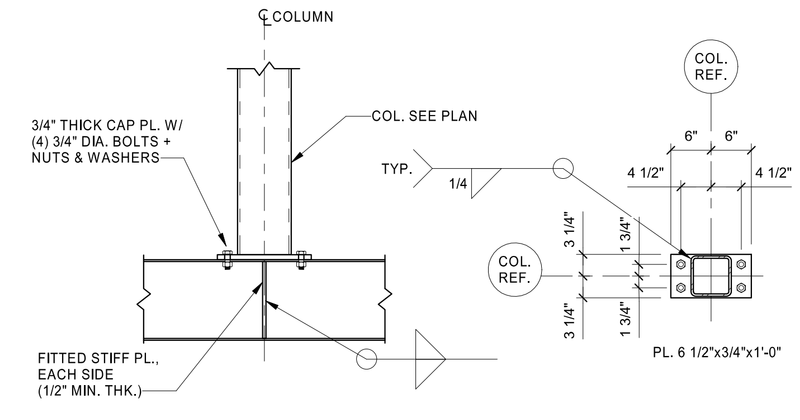
3/4" = 1'-0"



NOTES:
1. CENTER THE PL. ON THE OPNG. & CUT THE OPNG. THRU. THE DECK AND NEW PL.
2. FOR OPNGS. EQ. TO OR SMALLER THAN 4" DIA., THEN SHEET METAL PL. IS NOT REQ'D.

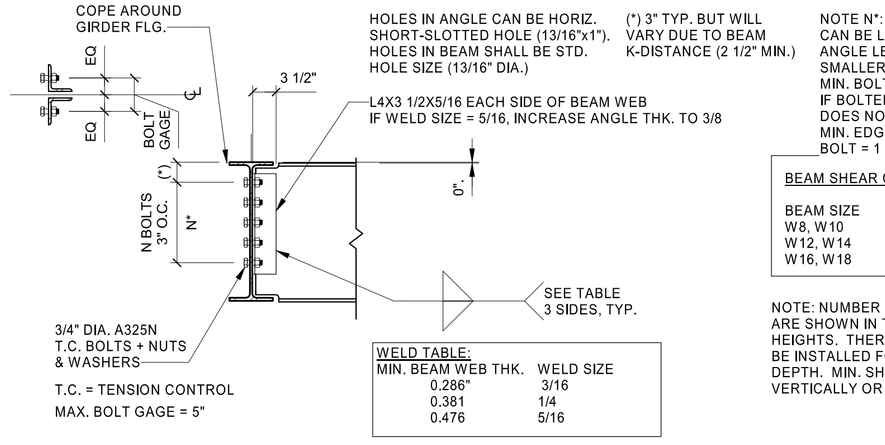
4 ROOF OPNG. DETAIL FOR 4" AND UP TO 12" DIA. OR SQ.

3/4" = 1'-0"



5 COL. ON BEAM CONN. DETAIL

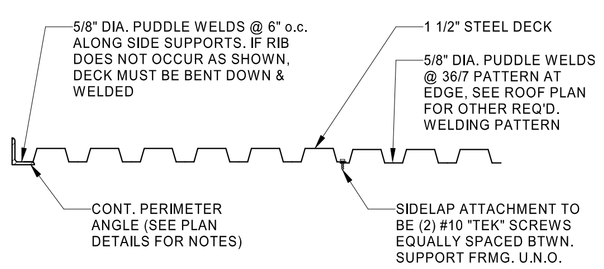
3/4" = 1'-0"



6 BEAM TO BEAM DBL ANGLE SHEAR CONN. DETAIL

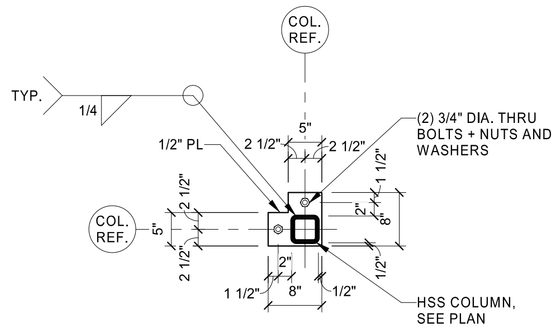
3/4" = 1'-0"

NOTE:
1. PROVIDE 5/8" DIA. PUDDLE WELDS @ 6" o.c. FOR END LAPS (MIN. 3" LAP) & ENDS OF EACH DECK RUN.
2. ATTACHMENT AROUND ROOF OPNGS. SHALL BE WELDS @ 6" o.c..



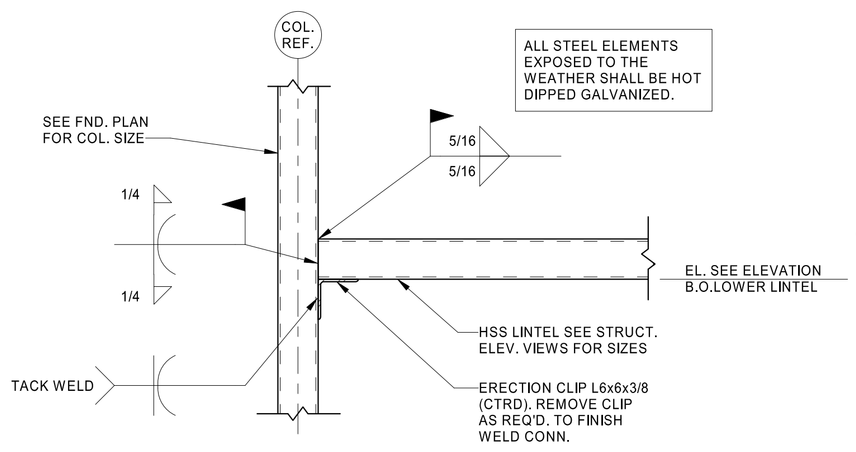
7A ROOF DECK ATTACHMENT

NOT TO SCALE



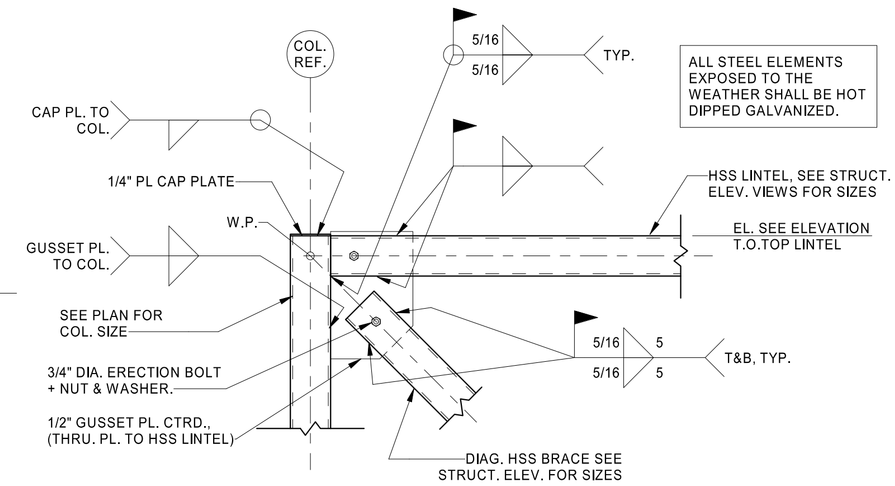
8 COLUMN CAP PLATE - CP1

3/4" = 1'-0"



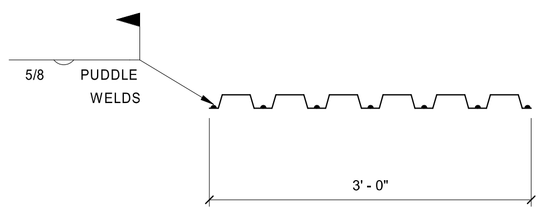
9 HSS LINTEL CONN. TO HSS COL.

3/4" = 1'-0"



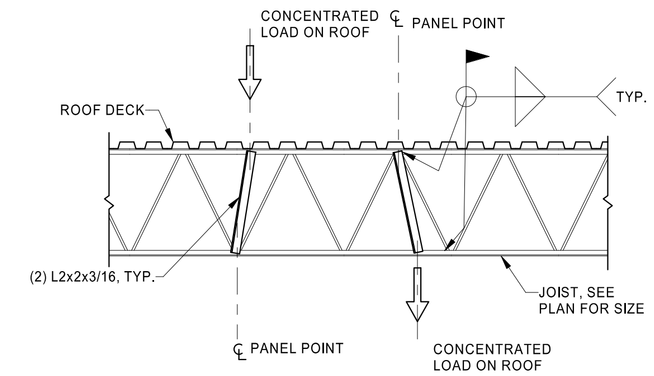
10 DIAG. BRACE TOP CONNECTION

3/4" = 1'-0"



7B DECK DIAPHRAGM PATTERN 36/7

1" = 1'-0"



PER SJI: FOR NOMINAL CONCENTRATED LOADS BETWEEN PANEL POINTS, WHICH HAVE BEEN ACCOUNTED FOR IN THE SPECIFIED UNIFORM DESIGN LOADS, A "STRUT" TO TRANSFER THE LOAD TO A PANEL POINT ON THE OPPOSITE CHORD SHALL NOT BE REQUIRED, PROVIDED THE SUM OF THE CONCENTRATED LOADS WITHIN A CHORD PANEL DOES NOT EXCEED 100 POUNDS AND THE ATTACHMENTS ARE CONCENTRIC TO THE CHORD.

IF TOTAL LOAD IS ECCENTRIC (ONE SIDED CONNECTION) AND OR THE LOAD PER CONNECTION IS GREATER THAN 100 POUNDS, THEN JOIST STIFFENER "STRUT" SHALL BE INSTALL ON EACH SIDE PER DETAIL.

11 JOIST STIFFENER CONN. DETAIL

1/2" = 1'-0"

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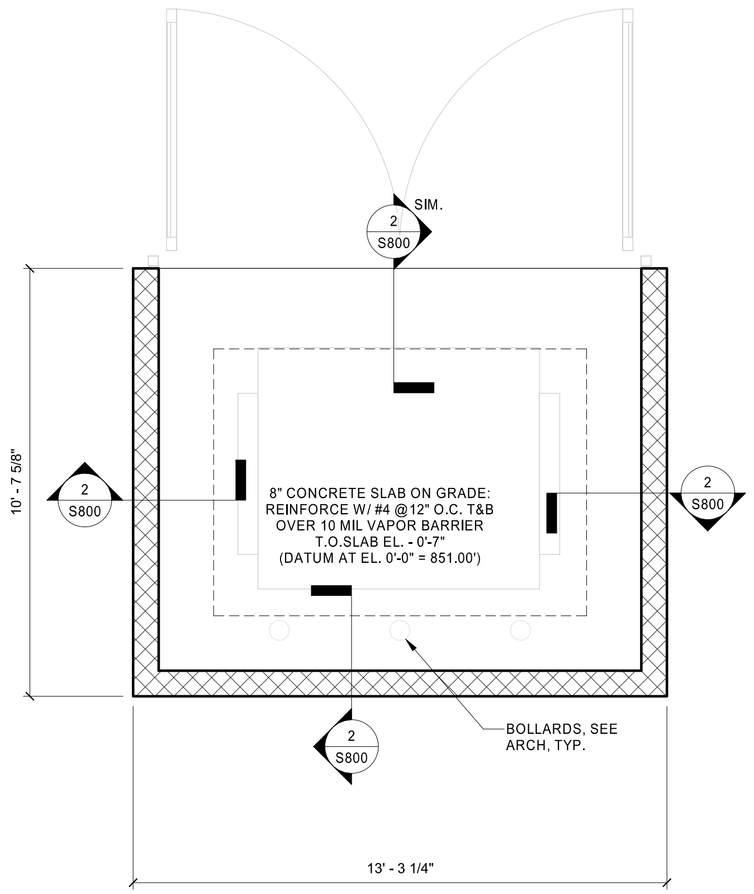
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SIGNATURE:
DATE: 2024.01.11 08:15:38-06'00'
LICENSE NO. 50338

STEEL FRAMING DETAILS

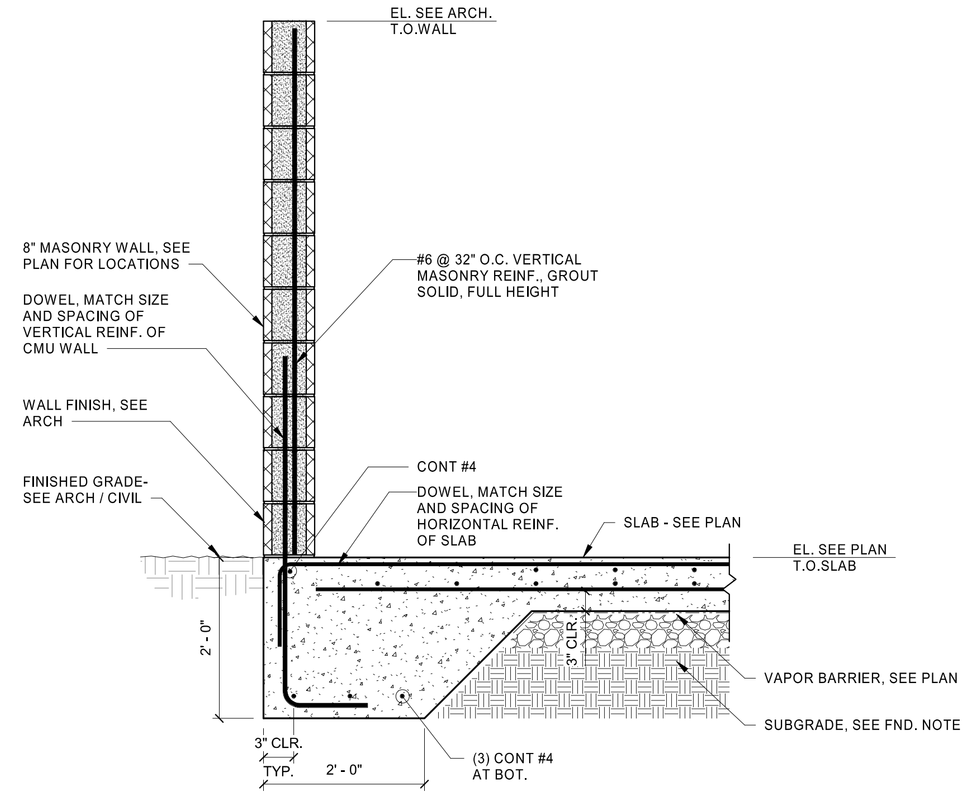
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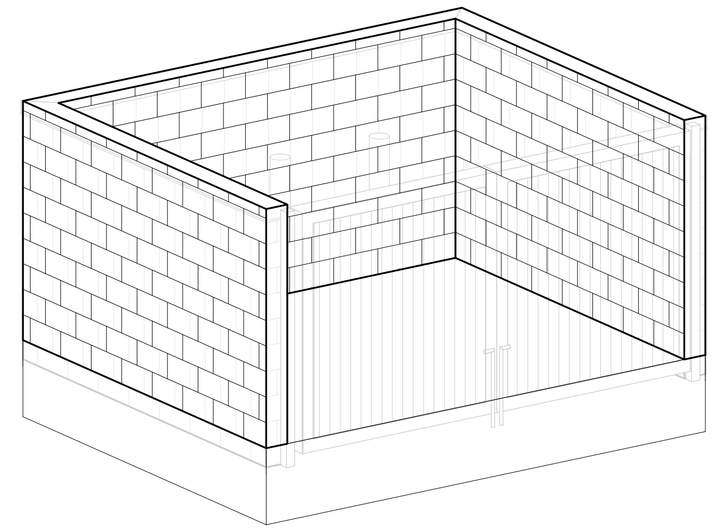
5.2D - PLAN SET



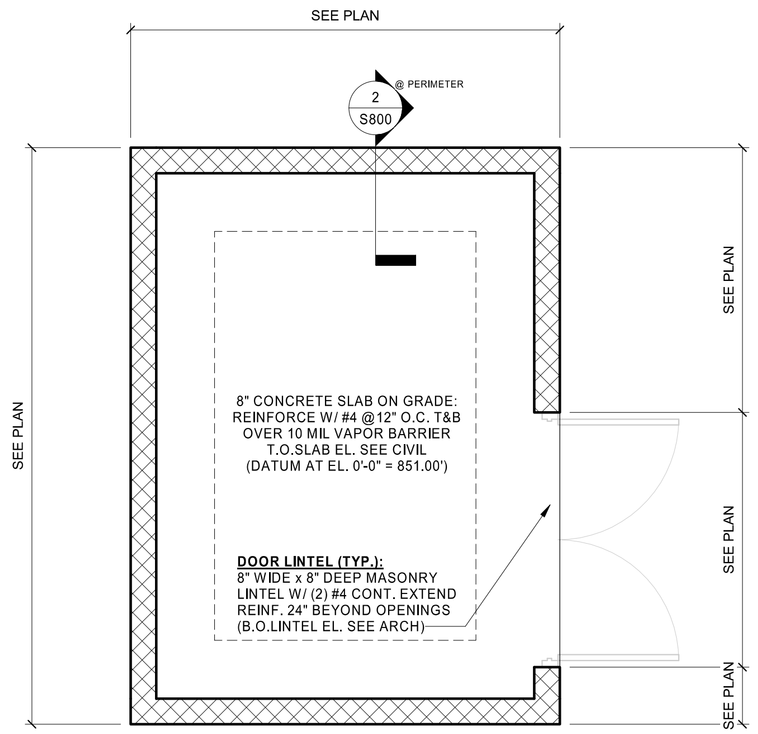
1 FOUNDATION PLAN @ DUMPSTER
3/8" = 1'-0"



2 SECTION @ SCREEN WALL
3/4" = 1'-0"



3 ISOMETRIC - DUMPSTER



4 FOUNDATION PLAN @ VACUUM ENCLOSURE
3/8" = 1'-0"

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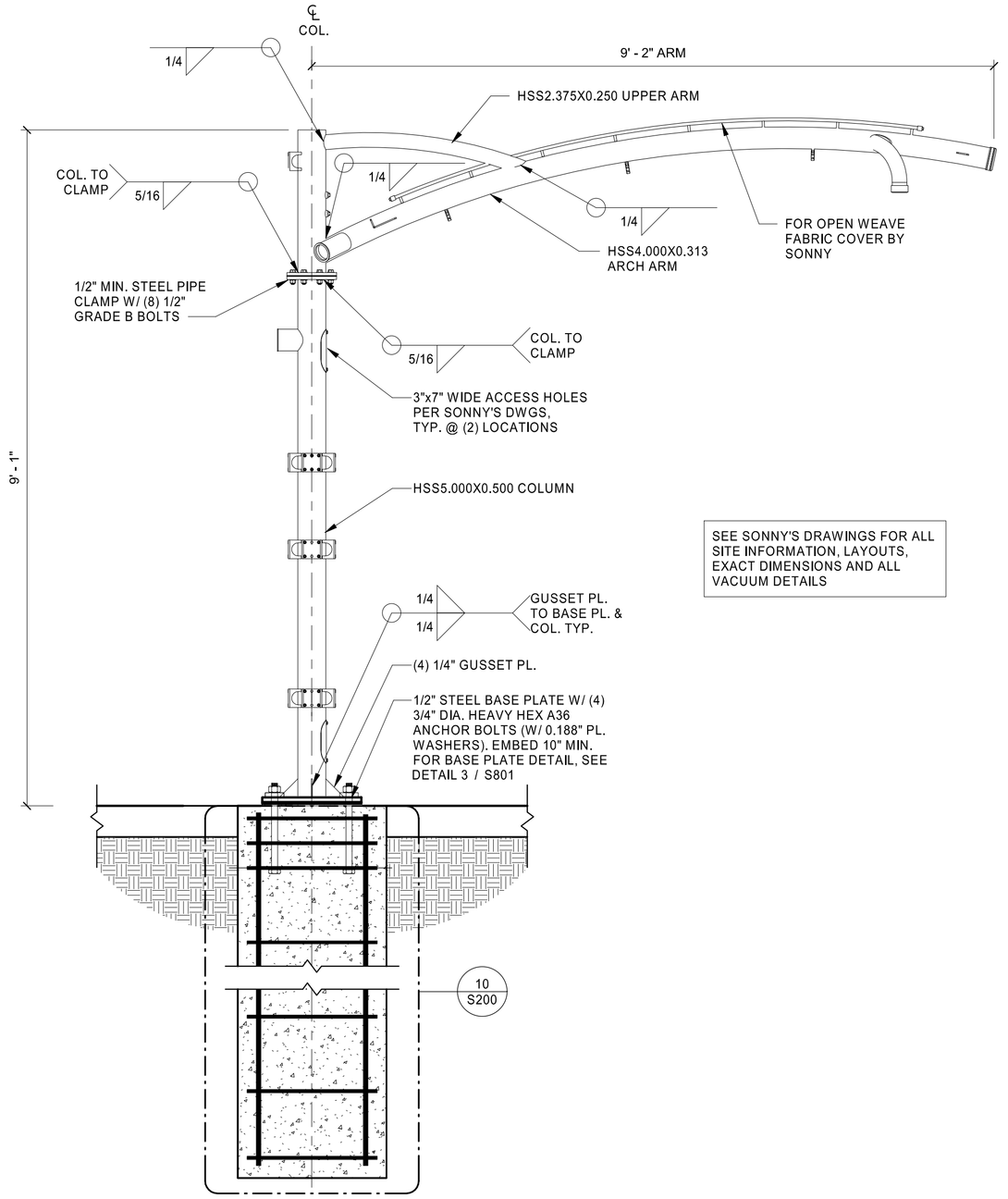
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DUMPSTER & VACUUM ENCLOSURE

SHEET: S800

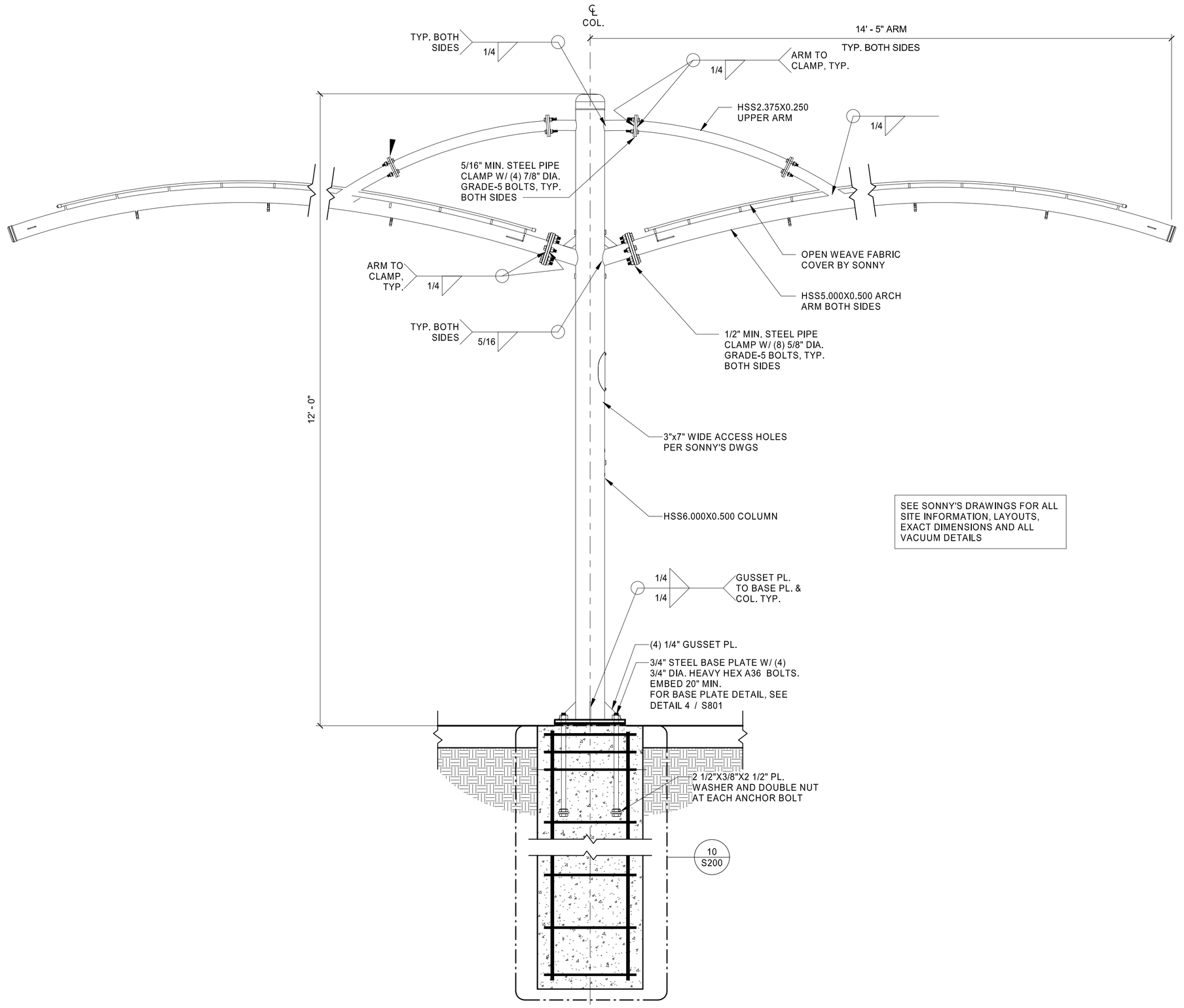
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13-2890c-DUMPSTER & VACUUM ENCLOSURE

5.2D - PLAN SET



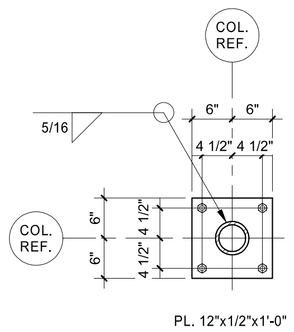
1 VACUUM CANOPY DETAIL

3/4" = 1'-0"



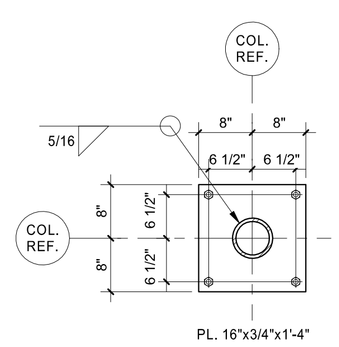
2 PAY STATION CANOPY DETAIL

3/4" = 1'-0"



3 VACUUM CANOPY BASE PLATE

3/4" = 1'-0"



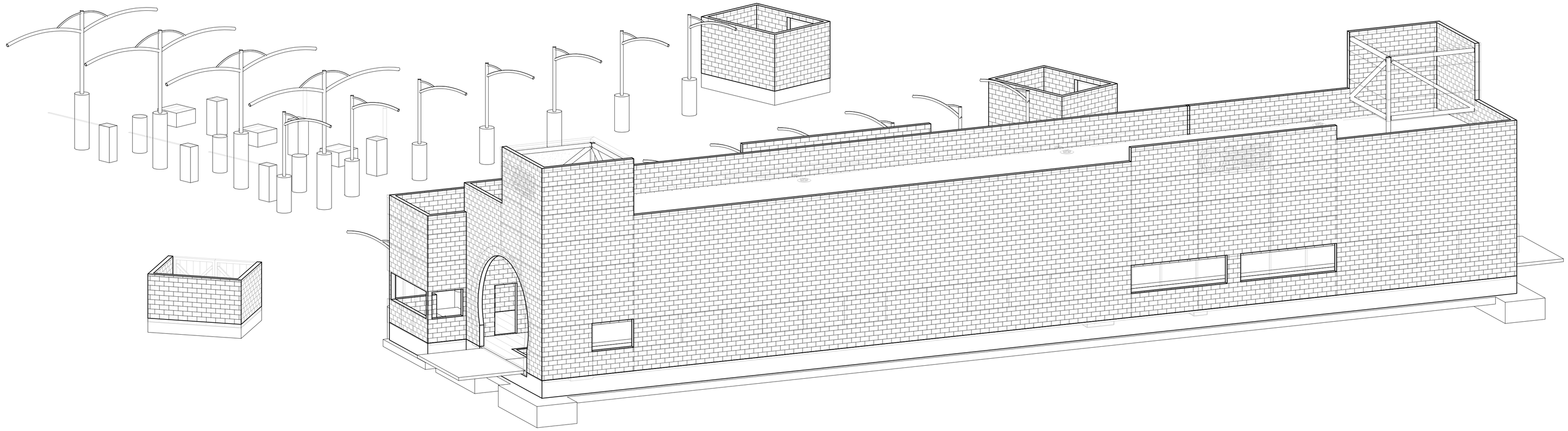
4 PAY STATION CANOPY BASE PLATE

3/4" = 1'-0"

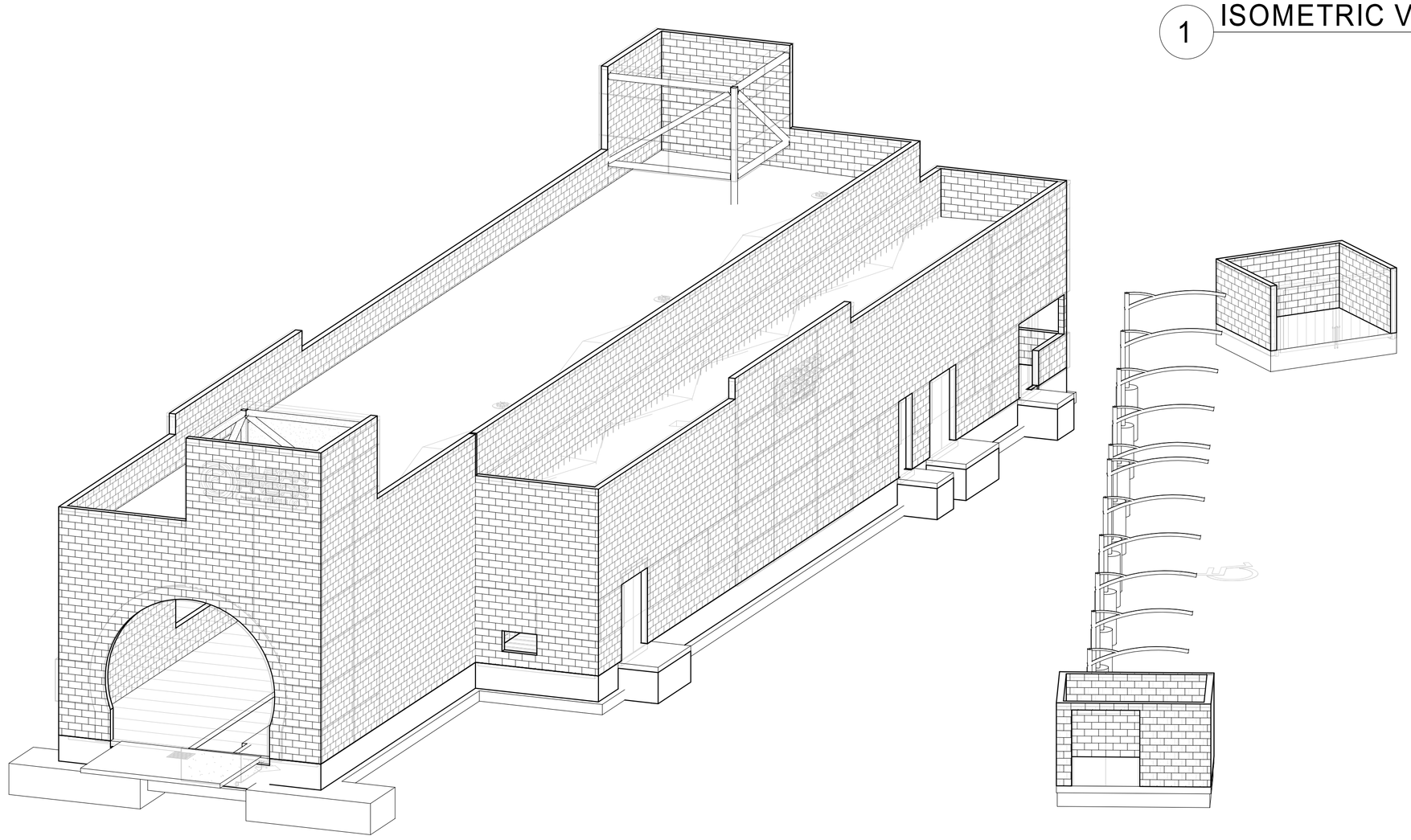
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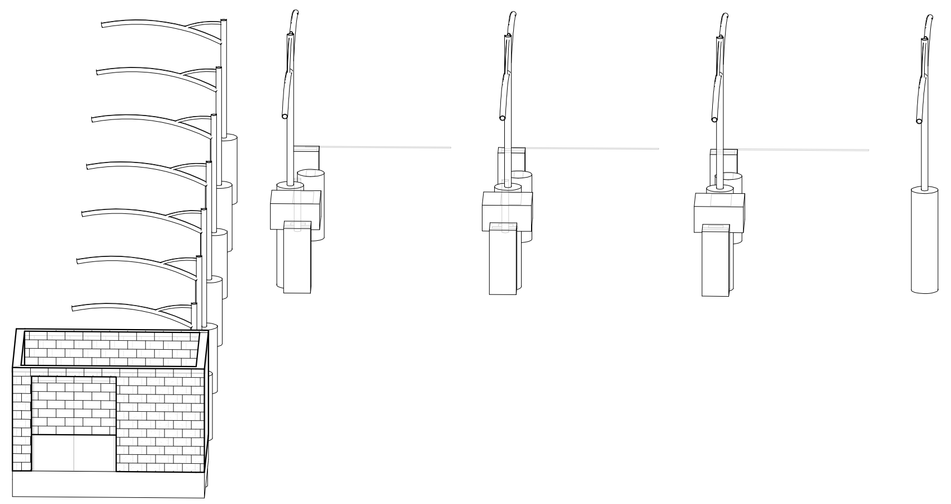
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5.2D - PLAN SET



1 ISOMETRIC VIEW 1





2 ISOMETRIC VIEW 2

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TRUE BLUE CAR WASH

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BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK		
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DRAWN BY:	YJN
DOCUMENT DATE:	01/10/24

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PRINT NAME: LICENSED TO
SIGNATURE: LICENSE NO. 50338
DATE: 2024.01.11 08:15:01-06'00'

ISOMETRIC VIEWS

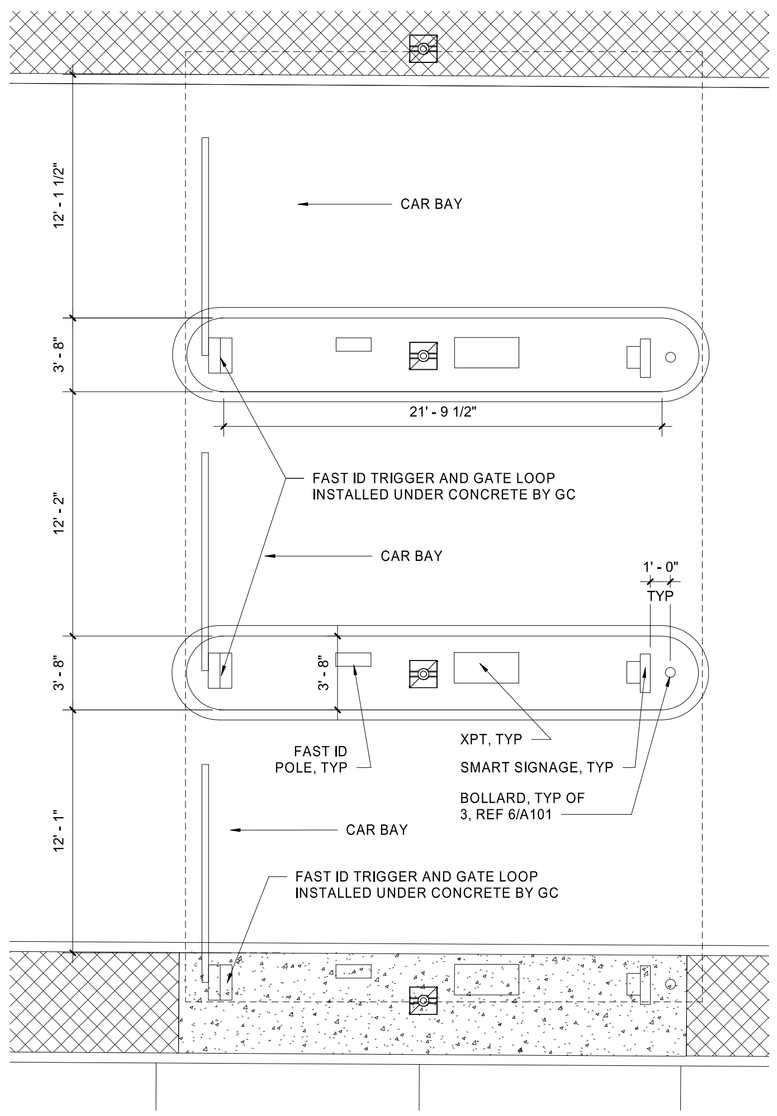
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C:\Users\jlowe.yan\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_STR_V22_HFA-Jlowe.Yan.rvt
14-S900-ISOMETRIC VIEWS

5.2D - PLAN SET

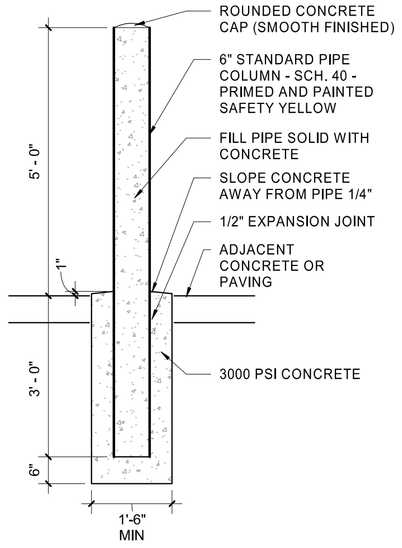
REF STRUCTURAL FOR PAY STATION CANOPY AND FOUNDATION.REF VENDOR DRAWINGS FOR PAY STATION EQUIPMENT

NOTE: ALL CONCRETE FOOTERS TO BE BY GC



5 PAY STATION CANOPY FLOOR PLAN

3/16" = 1'-0"

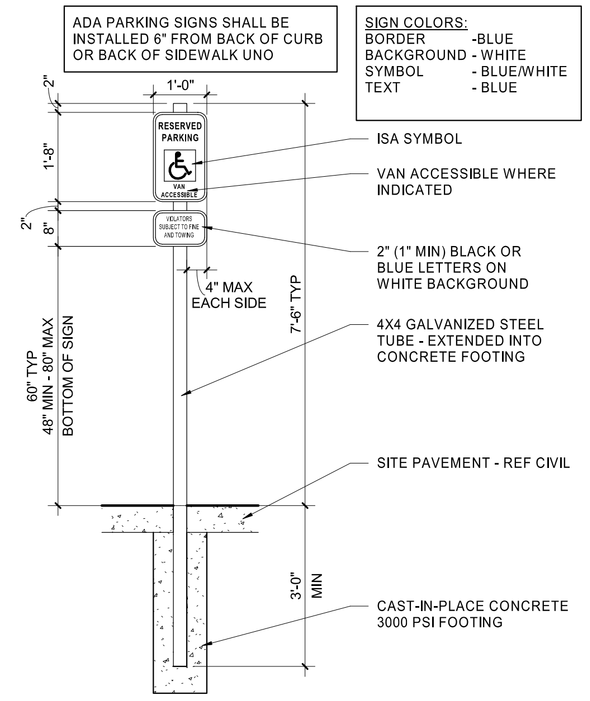


4 PIPE BOLLARD DETAIL

1/2" = 1'-0"

ADA PARKING SIGNS SHALL BE INSTALLED 6" FROM BACK OF CURB OR BACK OF SIDEWALK UNO

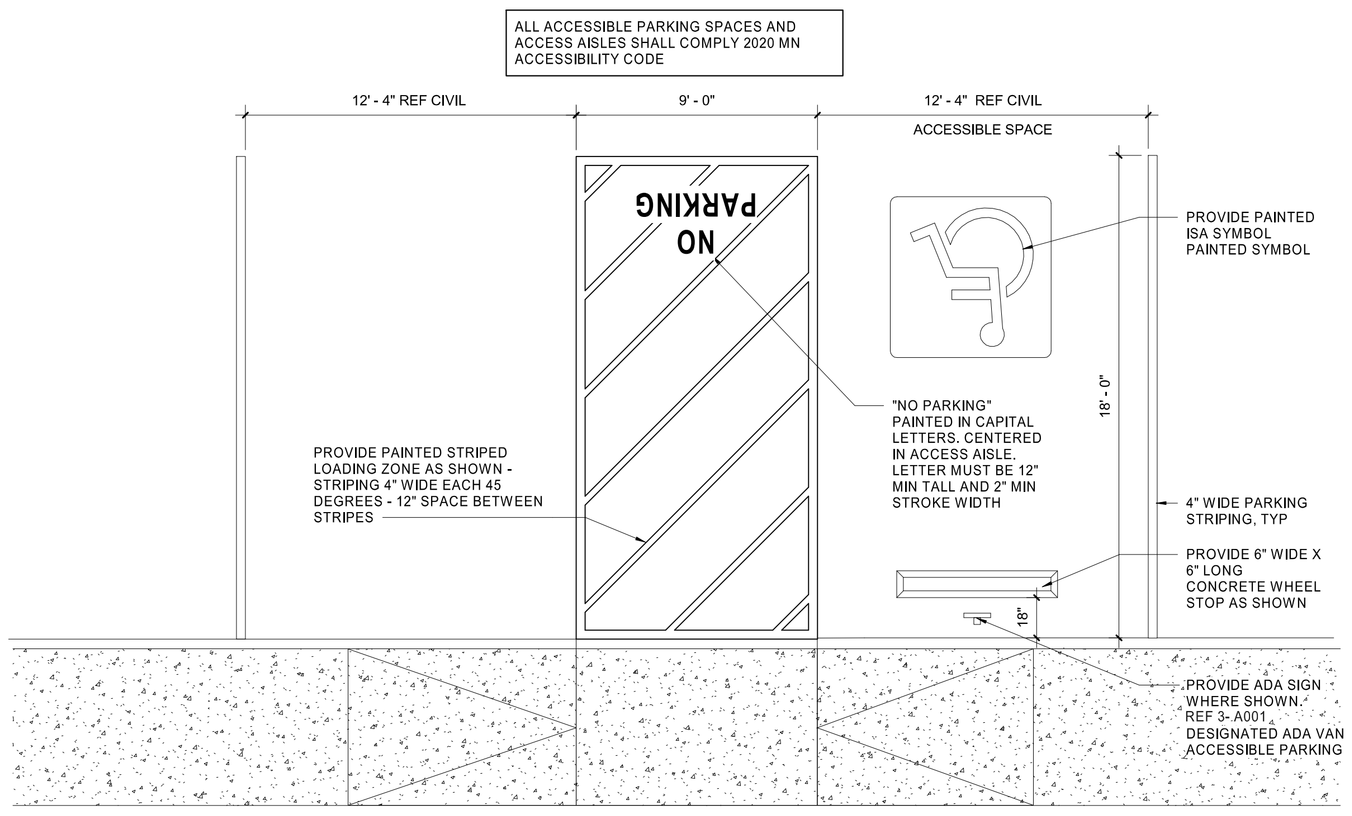
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BORDER -BLUE
BACKGROUND - WHITE
SYMBOL - BLUE/WHITE
TEXT - BLUE



3 ADA PARKING SIGN

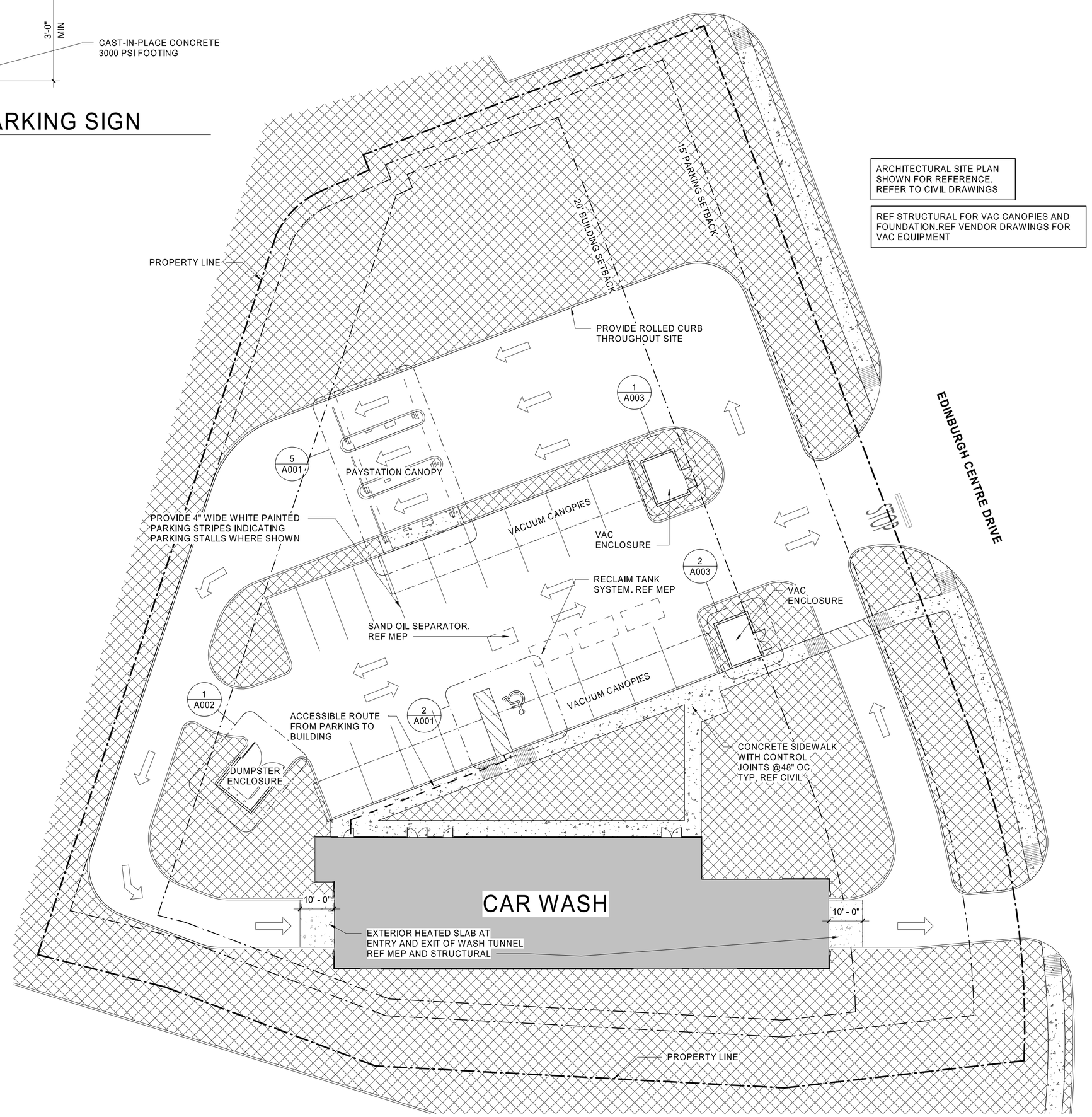
1/2" = 1'-0"

ALL ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL COMPLY 2020 MN ACCESSIBILITY CODE



2 ENLARGED ADA PARKING

1/4" = 1'-0"



1 ARCHITECTURAL SITE PLAN - FOR REFERENCE ONLY

1" = 20'-0"

ARCHITECTURAL SITE PLAN SHOWN FOR REFERENCE. REFER TO CIVIL DRAWINGS

REF STRUCTURAL FOR VAC CANOPIES AND FOUNDATION.REF VENDOR DRAWINGS FOR VAC EQUIPMENT

SITE LEGEND

- LANDSCAPED AREA
- SIDEWALK AREA
- CONCRETE PAVEMENT
- PROPERTY LINE
- DIRECTION OF TRAFFIC

GENERAL SITE NOTES

1. REFER TO BOUNDARY SURVEY TO ESTABLISH PROPERTY LINES AND EASEMENTS.
2. REFER TO GEOTECHNICAL INVESTIGATION REPORT FOR PAVING SUBGRADE
3. REFER TO CIVIL DRAWINGS FOR SITE GRADING/DRAINAGE AND DRIVEWAY AND DETENTION DETAILS
4. ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 1:50 SLOPE IN ANY DIRECTION
5. ACCESSIBLE ROUTE FROM PARKING TO BUILDING SHALL NOT EXCEED 1:50 SLOPE
6. NO CROSS SLOPES SHALL EXCEED 1:50 (2.0% SLOPE) OR 1/4" PER FOOT IN ANY LOCATION

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8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

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DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

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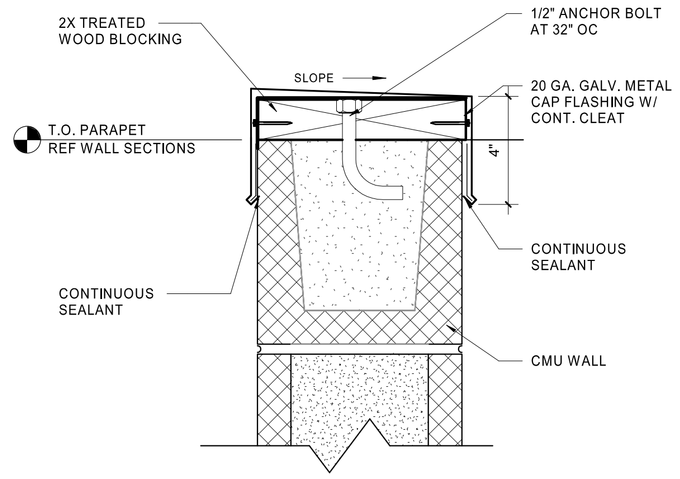
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Signature:
Date: 2024.01.10
License #: 55742
14:47:14-06'00'

ARCHITECTURAL SITE PLAN

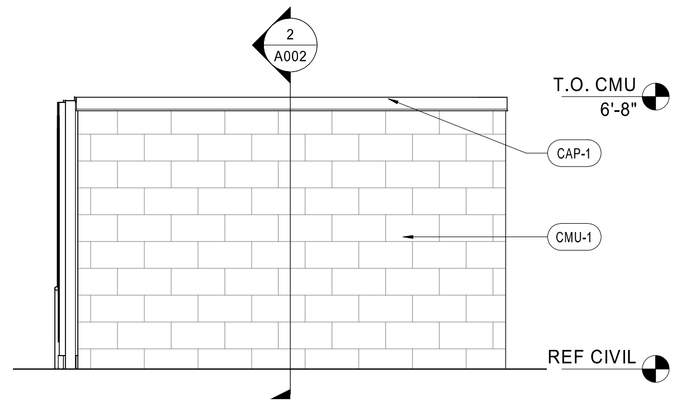
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A001-ARCHITECTURAL SITE PLAN

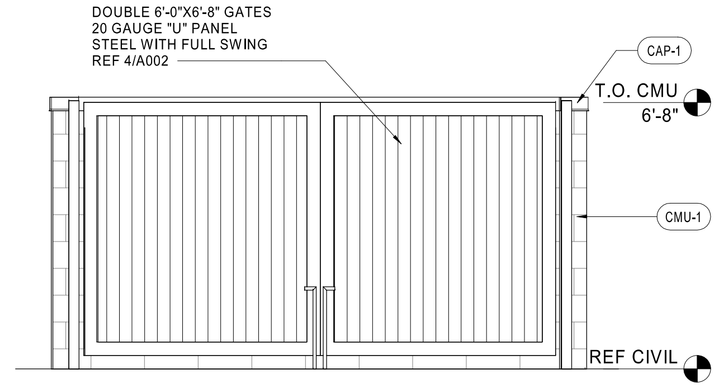
5.2D - PLAN SET



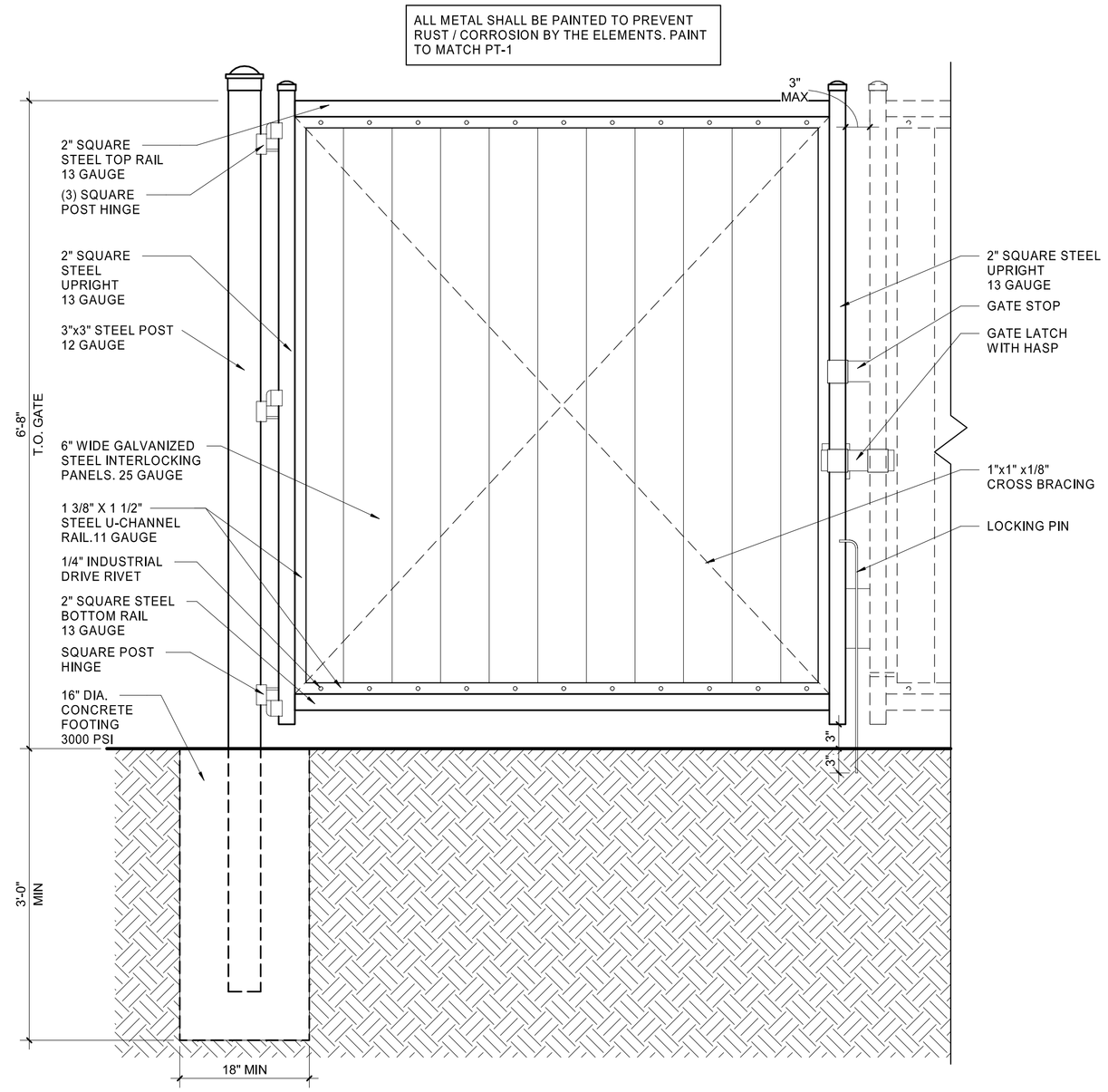
7 PARAPET AT CMU WALL
3" = 1'-0"



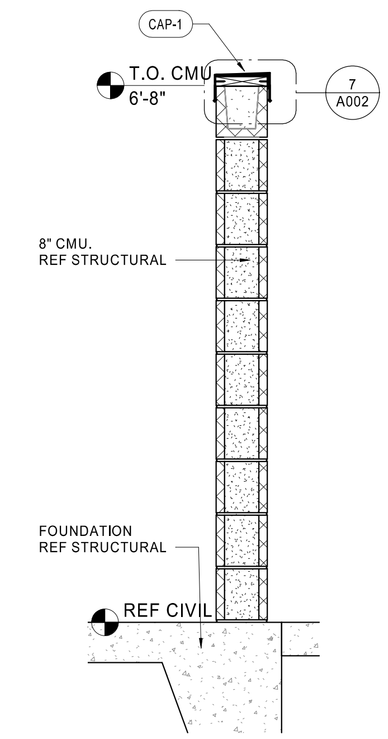
6 SIDE ELEVATION
3/8" = 1'-0"



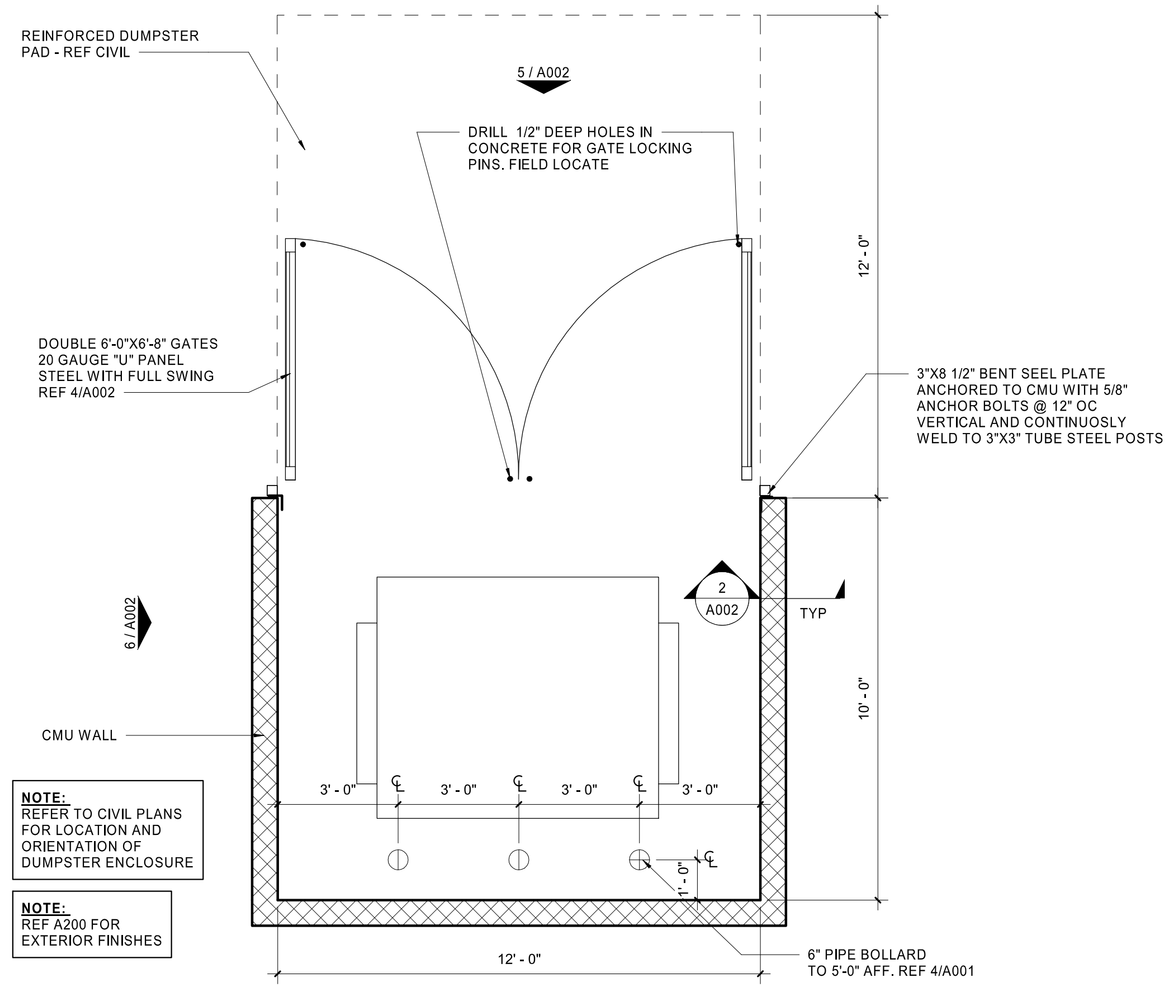
5 FRONT ELEVATION
3/8" = 1'-0"



4 METAL GATE DETAIL
1" = 1'-0"



2 WALL SECTION
3/4" = 1'-0"



NOTE:
REFER TO CIVIL PLANS FOR LOCATION AND ORIENTATION OF DUMPSTER ENCLOSURE

NOTE:
REF A200 FOR EXTERIOR FINISHES

1 DUMPSTER FLOOR PLAN
3/8" = 1'-0"

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BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

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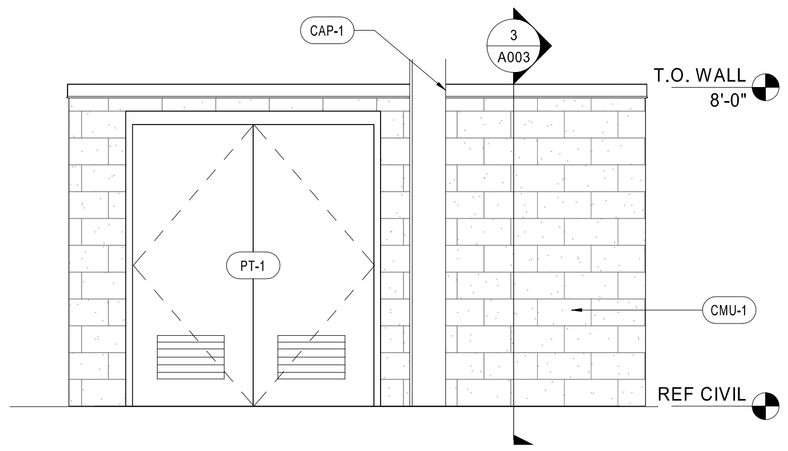
Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:47:22-06'00'
License #: 55742

DUMPSTER ENCLOSURE PLAN AND DETAILS

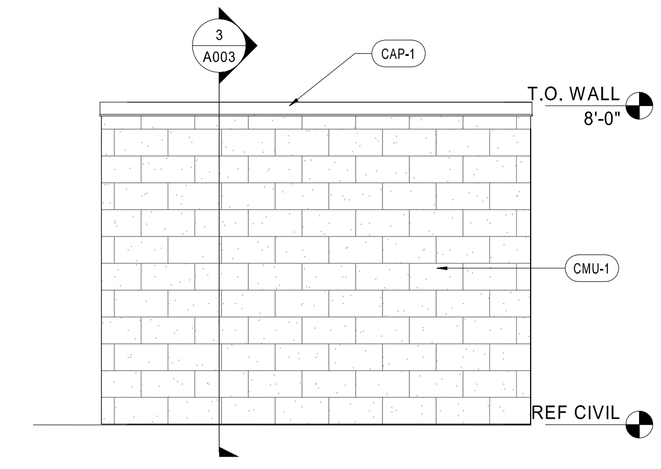
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A002-DUMPSTER ENCLOSURE PLAN AND DETAILS

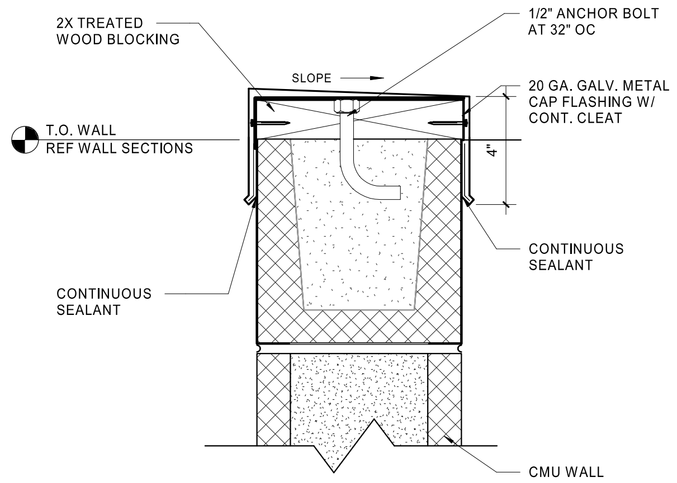
5.2D - PLAN SET



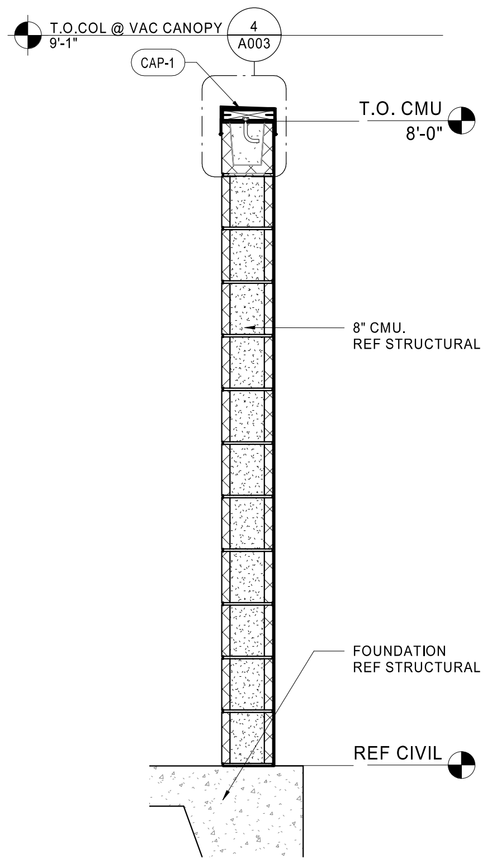
6 VAC ENLOSURE ELEVATION
3/8" = 1'-0"



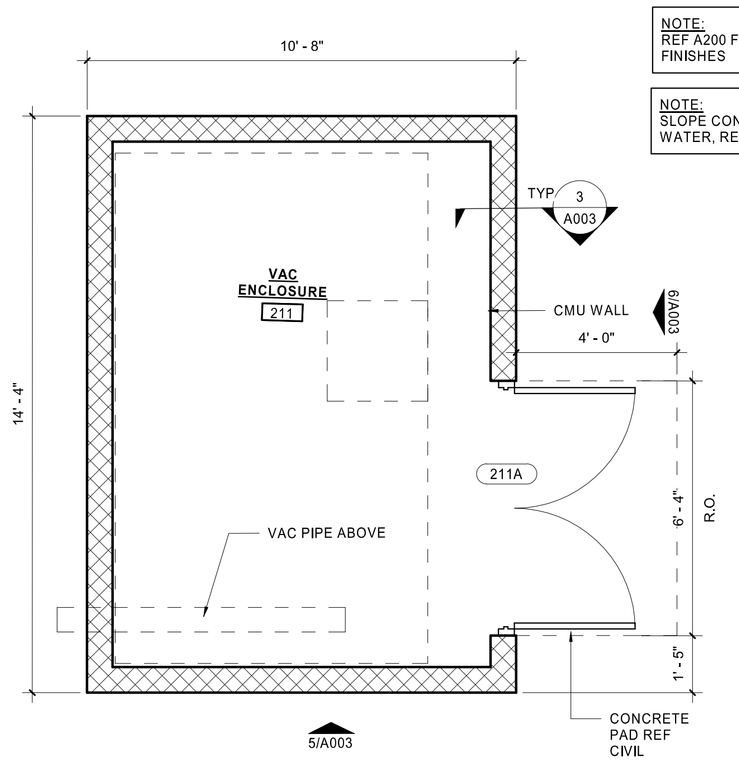
5 VAC ENCLOSURE ELEVATION
3/8" = 1'-0"



4 PARAPET AT CMU WALL
3" = 1'-0"



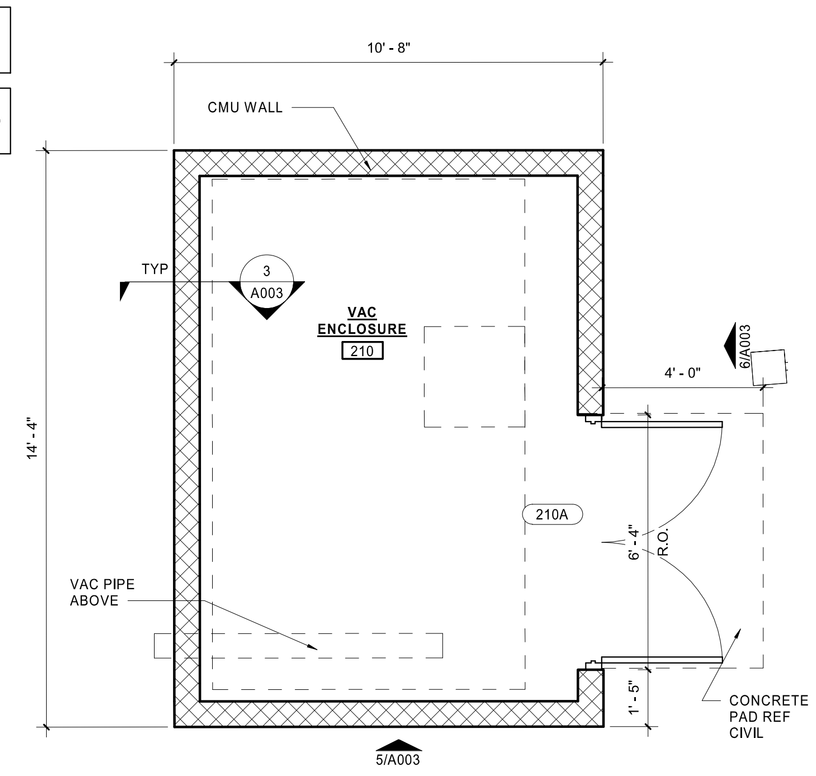
3 WALL SECTION
3/4" = 1'-0"



NOTE:
REF A200 FOR EXTERIOR FINISHES

NOTE:
SLOPE CONCRETE TO SHED WATER, REF STRUCTURAL

2 ENLARGED VAC ENCLOSURE 2
3/8" = 1'-0"



1 ENLARGED VAC ENCLOSURE 1
3/8" = 1'-0"

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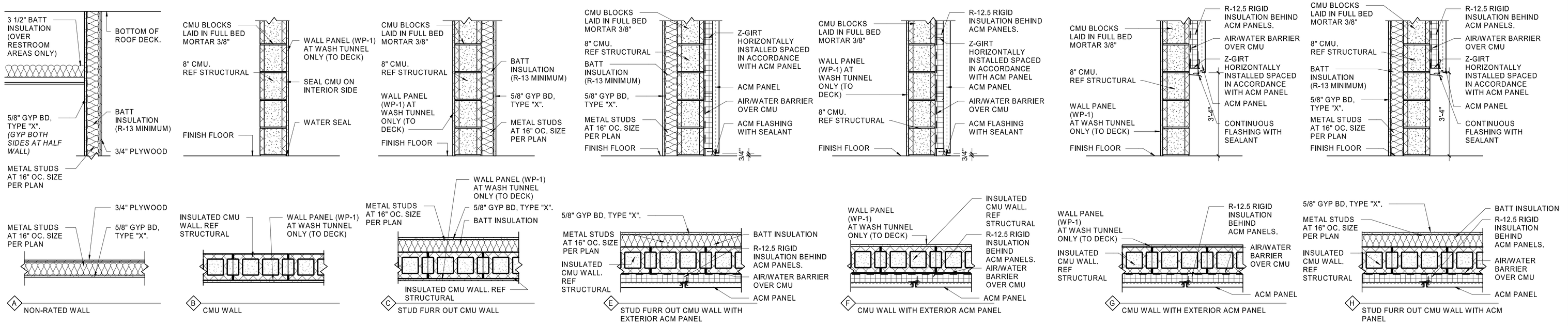
VAC ENCLOSURE PLANS AND DETAILS

SHEET:
A003

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A003-VAC ENCLOSURE PLANS AND DETAILS

5.2D - PLAN SET

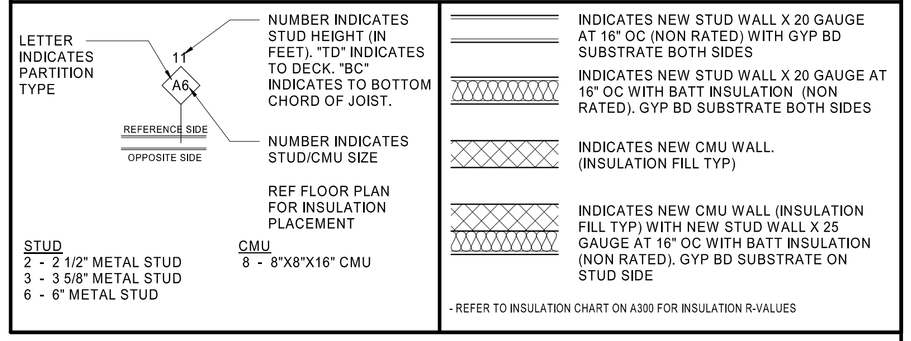
WALL TYPES



GENERAL NOTES

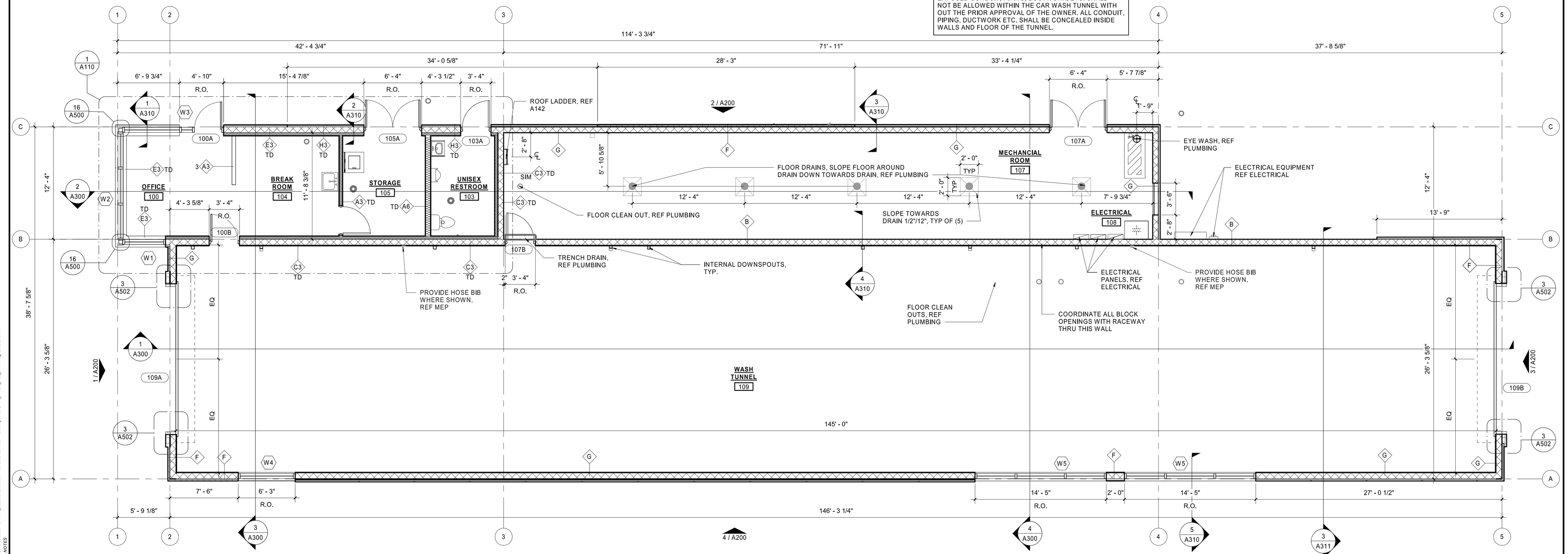
1. ALL DIMENSIONS TAKEN FROM STUD WALLS ARE FROM FACE OF STUD UNO.
2. ALL DIMENSIONS TAKEN FROM CMU WALLS ARE FROM FACE OF CMU UNO
3. USE 5/8" GYP BD ON NON-RATED PARTITIONS UNO.
4. CONTINUE FINISH MATERIAL TO A MINIMUM OF 6" ABOVE SUSPENDED CEILING SYSTEMS UNO.
5. REF PARTITION KEY SYMBOL FOR STUD THICKNESS.
6. PROVIDE ALTERNATING DIAGONAL STUD BRACING FROM DECK TO WALL STUDS ABOVE CEILING AT 48" OC FOR PARTITION STUDS UNDER 6" WIDE.
7. WALL INSULATION WHERE INDICATED ON PLANS
8. GC SHALL USE FIRE RESISTANT PLYWOOD SUBSTRATE BEHIND ALL ELECTRICAL PANELS.
9. ALL GYPSUM BOARD IN RESTROOM AND 105 STORAGE SHALL BE WATER RESISTANT.
10. WALLS OF BREAKROOM 104 ADJACENT TO MILLWORK WITH SINK SHALL HAVE WATER RESISTANT GYP BD
11. GC SHALL PROVIDE DOOR STOPS FOR ALL DOORS
12. PAINT ALL EXPOSED STRUCTURAL MEMBERS AT THE EXTERIOR
13. INTERIOR CMU WALLS SHALL BE GRAY SMOOTHFACE, UNO

WALL LEGEND



2 WALL TYPE DETAIL

EXPOSED CONDUIT, PIPING, DUCTWORK, ETC. SHALL NOT BE ALLOWED WITHIN THE CAR WASH TUNNEL WITH OUT THE PRIOR APPROVAL OF THE OWNER. ALL CONDUIT, PIPING, DUCTWORK ETC. SHALL BE CONCEALED INSIDE WALLS AND FLOOR OF THE TUNNEL.



1 FLOOR PLAN

3/16" = 1'-0"

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Date: 2024.01.10 14:47:39-06'00'
License # 55742

FLOOR PLAN AND NOTES

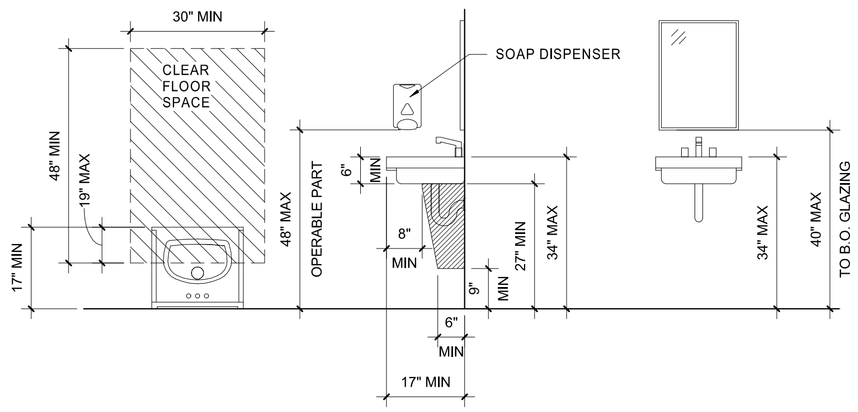
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A100-FLOOR PLAN AND NOTES

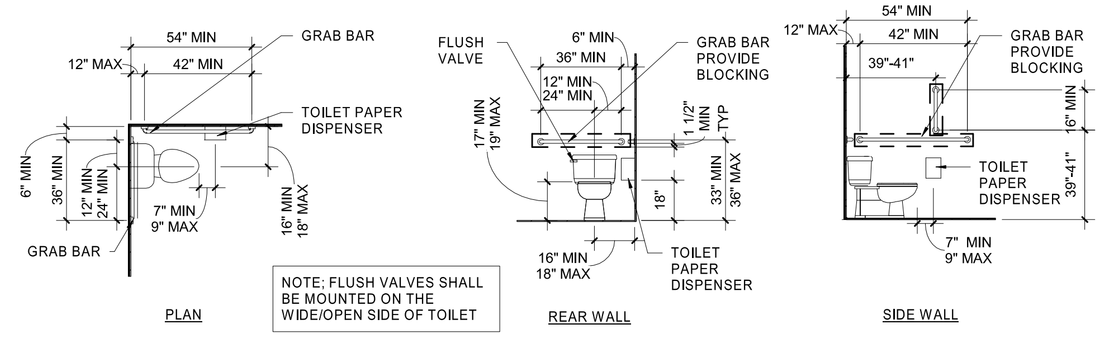
5.2D - PLAN SET

RESTROOM EQUIPMENT SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	QTY	INSTALLED BY	SUPPLIED BY	REMARKS
R2	GRAB BAR	BOBRICK OR EQUAL	B-6806	3	GC	GC	1 1/2" DIAMETER. (1) 36" LONG (1) 42" LONG (1) 18" LONG; BRUSHED NICKEL
R3	SOAP DISPENSERS	GOJO OR EQUAL	PRO 2000 SUPRO MAX	1	GC	GC	---
R4	TOILET PAPER DISPENSER	BOBRICK OR EQUAL	TBD	1	GC	GC	
R5	TOILET SEAT COVER	BOBRICK OR EQUAL	TBD	1	GC	GC	
R6	ELECTRIC HAND DRYER	EXCEL DRYER	TA-ABS-110-120V 7-7.7A - 770-915W	1	GC	GC	
R7	WALL HUNG URINAL SCREEN	BOBRICK OR EQUAL	1030 SERIES	2	GC	GC	
R8	MIRROR - 18X36	BOBRICK	B-165 1836	1	GC	GC	CHROME TRIM WITH CONCEALED FASTENERS

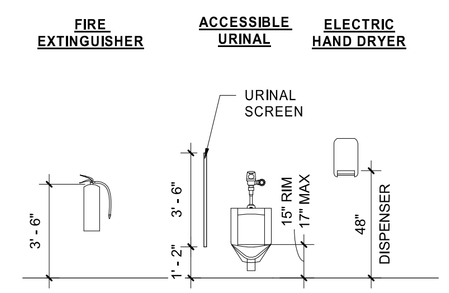


9 ACCESSIBLE HANK SINK
1/2" = 1'-0"

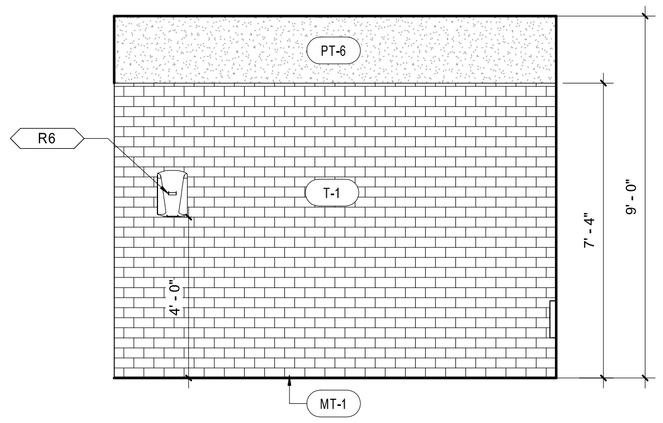


NOTE; FLUSH VALVES SHALL BE MOUNTED ON THE WIDE/OPEN SIDE OF TOILET

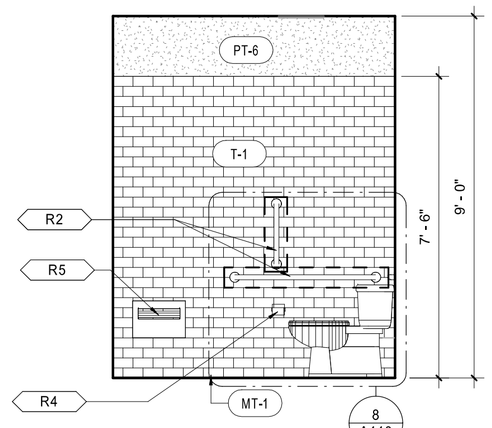
8 ACCESSIBLE WATER CLOSET
1/4" = 1'-0"



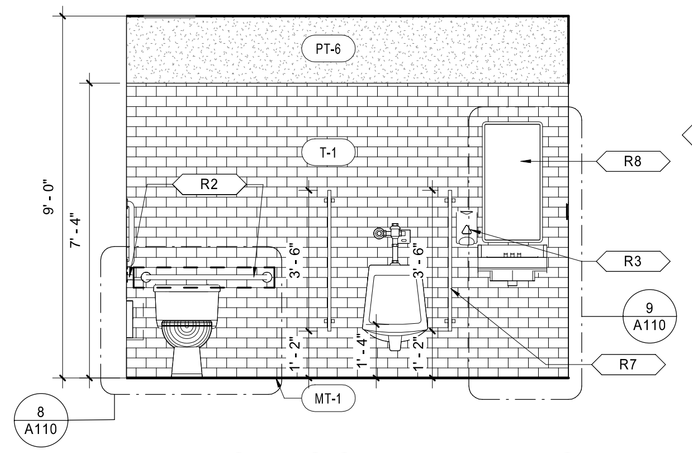
7 MOUNTING HEIGHTS
1/4" = 1'-0"



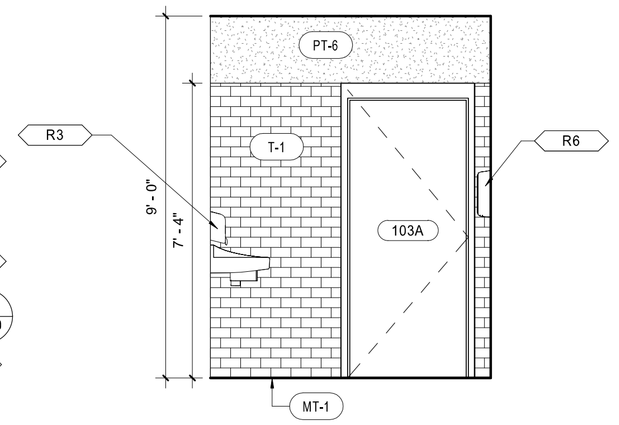
6 RESTROOM ELEVATION
3/8" = 1'-0"



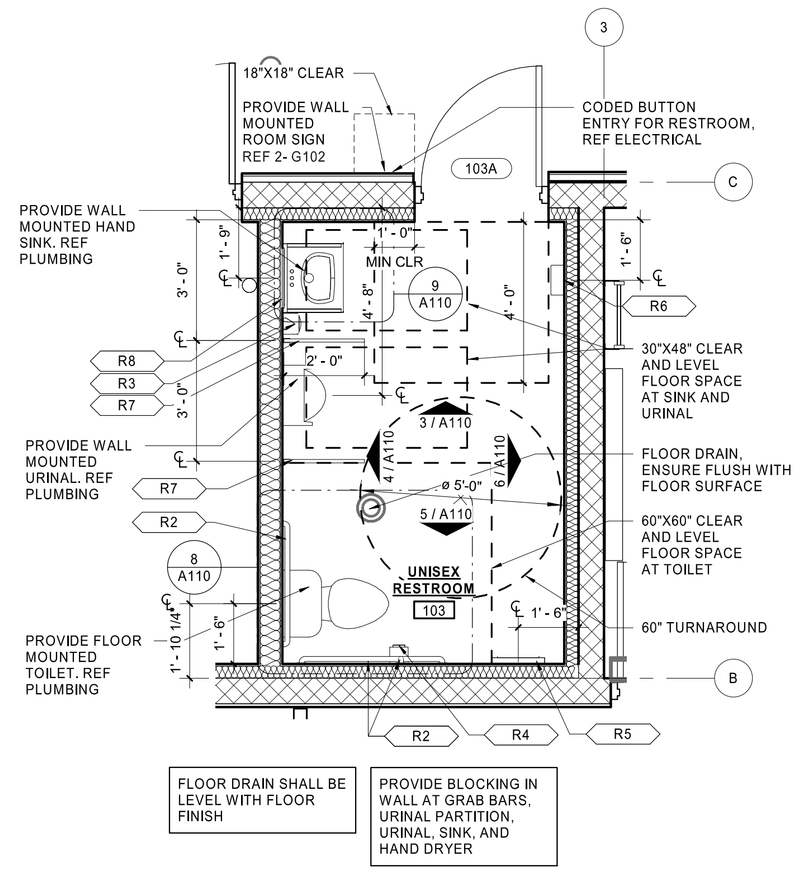
5 RESTROOM ELEVATION
3/8" = 1'-0"



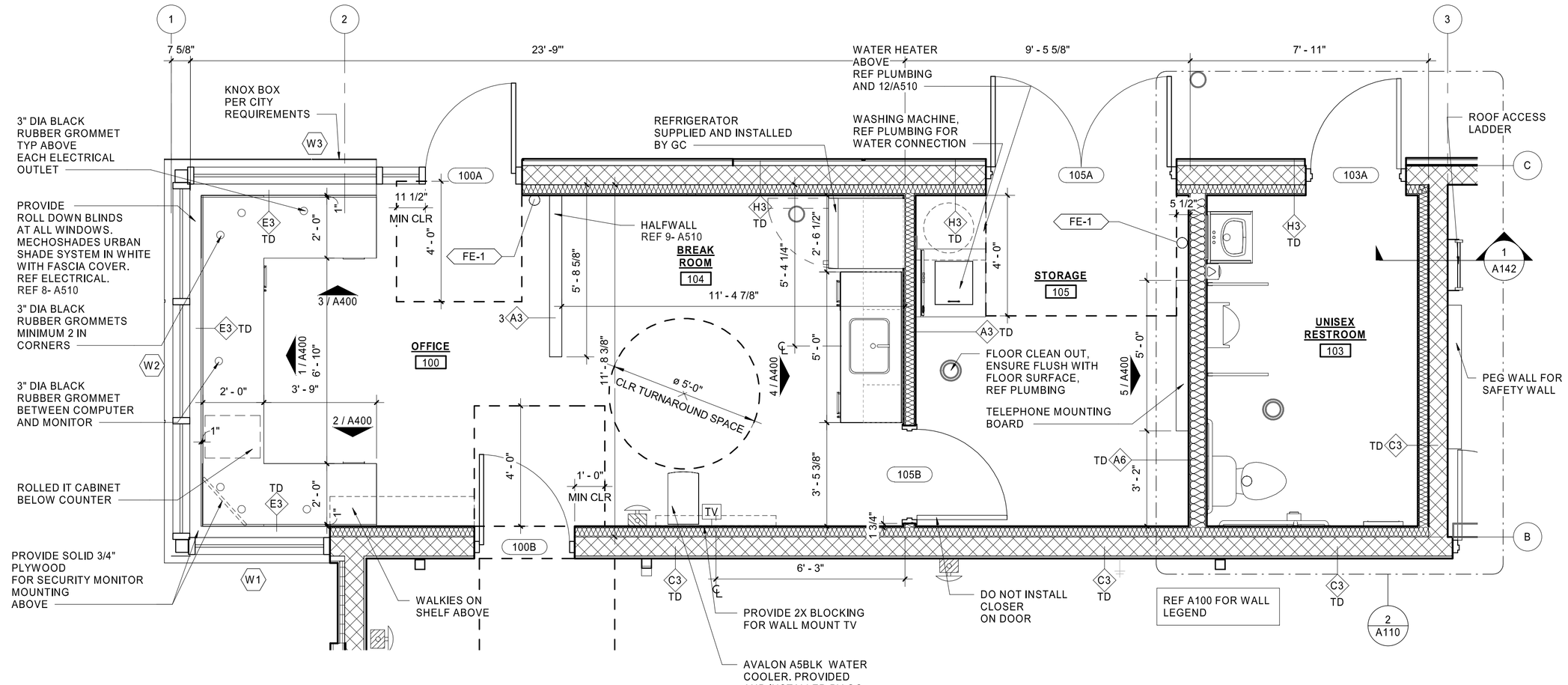
4 RESTROOM ELEVATION
3/8" = 1'-0"



3 RESTROOM ELEVATION
3/8" = 1'-0"



2 ENLARGED RESTROOM FLOOR PLAN
3/8" = 1'-0"



1 ENLARGED OFFICE FLOOR PLAN
3/8" = 1'-0"

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	JMC
DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

ARCHITECTS
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota
Print Name: JAMES EDWARD MANN
Signature:
Date: 01/10/24
License #: 55742
14:47:47-05'00'

ENLARGED FLOOR PLANS AND ELEVATIONS

SHEET:
A110

1/10/2024 1:08:57 PM
C:\Users\meghan.davis\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_ARCH_V22_ HFA Meghan Davis.rvt
A110-ENLARGED FLOOR PLANS AND ELEVATIONS

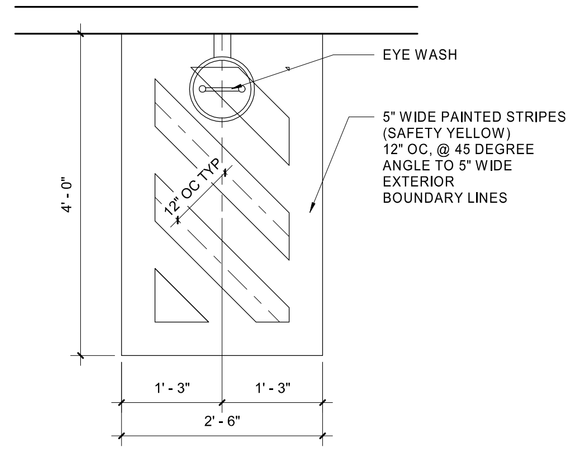
5.2D - PLAN SET

ROOM FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR FINISH	WALLS A BASE	WALLS A FINISH	WALLS B BASE	WALLS B FINISH	WALLS C BASE	WALLS C FINISH	WALLS D BASE	WALLS D FINISH	CEILINGS FINISH	CEILINGS HEIGHT	COMMENTS
100	OFFICE	CS-2	RBR-1	PT-6	RBR-1	PT-6	RBR-1	PT-6	RBR-1	PT-6	ACT-1	9'-0"	
103	UNISEX RESTROOM	CS-3	MT-1	T-1/P-6	MT-1	T-1/P-6	MT-1	T-1/P-6	MT-1	T-1/P-6	ACT-1	9'-0"	
104	BREAK ROOM	CS-2	RBR-1	PT-6	RBR-1	PT-6	RBR-1	PT-6	RBR-1	PT-6	ACT-1	9'-0"	
105	STORAGE	CS-2	NONE	PT-6	NONE	PT-6	NONE	PT-6	NONE	PT-6	PT-7	EXPOSED	
107	MECHANCIAL ROOM	CS-1	NONE	PT-6	NONE	PT-6	NONE	PT-6	NONE	PT-6	PT-7	EXPOSED	
108	ELECTRICAL	CS-1	NONE	PT-6	NONE	PT-6	NONE	PT-6	NONE	PT-6	PT-7	EXPOSED	
109	WASH TUNNEL	CS-1	NONE	WP-1	NONE	WP-1	NONE	WP-1	NONE	WP-1	WP-1	WP-1	

FINISH SCHEDULE

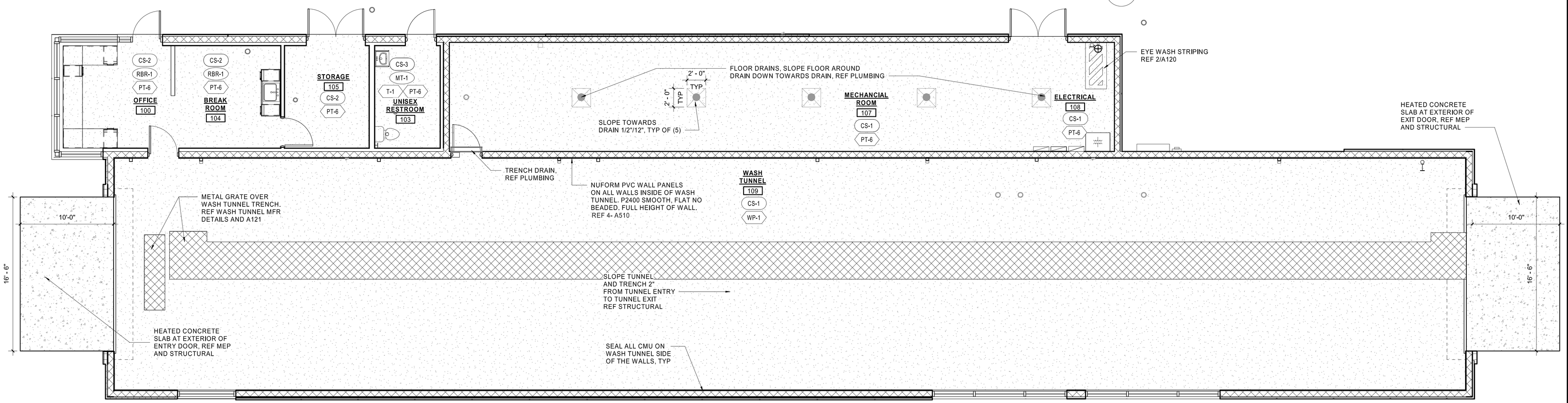
MARK	MATERIAL	MANUFACTURER	COLOR	NOTES
ACM-1	ACM PANEL	ALPOLIC/HD	COLOR TO MATCH PMS 15-4706 GRAY MIST	
ACM-2	ACM PANEL	ALPOLIC/HD	COLOR TO MATCH PMS 2757C	
ACT-1	2X4 LAY IN CELING	ARMSTRONG	ULTIMA - WHITE	15/16 GRID
CAP-1	PARAPET CAP		COLOR TO MATCH PMS 2757C	20 GA. METAL
CMU-1	8"X8"X16" SMOOTH FACE CMU	OLDCASTLE	WHITE LIMESTONE	MORTAR - SPEC MIX - SM250 ANTIQUE WHITE - WATER REPELLANT ADMIXTURE
CS-1	EXPOSED CONCRETE	---	GREY W/ BROOM FINISH	
CS-2	EXPOSED CONCRETE		ASHFORD CONCRETE SEALER: GREY W/ SLIP RESISTANT FINISH	
CS-3	EPOXY SEALER	BENJAMIN MOORE	GLOSS V430 - CLEAR	
EIF-3	EXTERIOR INSULATION FINISH SYSTEM	DRYVIT	COLOR TO MATCH PMS 2757C	
MR-2	STEEL ROOF DECKING	COREDECK BUILDING SOLUTIONS	1.5B 18 GA	REF STRUCTURAL
MT-1	TILE BASE	SCHLUTER	DILEX - AHKA BRUSHED NICKEL ANODIZED ALUMINUM	
PL-1	LAMINATE	WILSON ART	RUSTIC SLATE 4888-381	OFFICE COUNTER TOP
PL-2	LAMINATE	WILSON ART	LAPIS BLUE D417-60	OFFICE AND BREAKROOM CABINETS
PL-3	LAMINATE	WILSON ART	DOVE GRAY D92-60	BREAKROOM COUNTER
PT-1	PAINT	DUNN EDWARDS	FOGGY DAY DE6226	HM DOORS
PT-2	PAINT	DUNN EDWARDS	COLOR TO MATCH PMS 2757C	HM DOORS
PT-6	PAINT	DUNN EDWARDS	DE6366 - SILVER SPOON- SEMI-GLOSS	ENSURE BLOCK FILLER IS USED.
PT-7	PAINT	DUNN EDWARDS	DEW311 - FRENCH WHITE - FLAT	INTERIOR CEILING
RBR-1	WALL BASE	ROPPE	193 - BLACK/BRWN	PROFILE - 00 SIMPLICITY 4"
STUC-1	STUCCO	DRYVIT	DUNN EDWARDS - CHARCOAL SMUDGE DE6370	
T-1	TILE	DALTILE	MODERN DIMENSIONS - ARCTIC WHITE - 0190 - SEMI-GLOSS 3X6	1/8" MAPEI GROUT 09 GRAY -GRIS
TP0	MEMBRANE ROOFING	FIRESTONE	ULTRA PLY TPO 60 MIL - WHITE	15 YEAR WARRANTY OR EQUAL.
WP-1	WALL AND CEILING PANEL	NU-FORM OR EQUAL	P2400 WALL PANEL - FLAT SMOOTH NOT BEADED (WHITE)	REFERENCE 4 & 5/A510 FOR MOUNTING



2 STRIPING AT EYEWASH
3/4" = 1'-0"

FINISH PLAN LEGEND

XXX WALL FINISH TAG
XXX BASE FINISH TAG
XXX FLOOR FINISH TAG



1 FLOOR FINISH PLAN
3/16" = 1'-0"

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JOB NUMBER: 06-23-80005

ISSUE BLOCK

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DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

ARCHITECTS
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Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:47:55-06'00'
License #: 55742

FLOOR FINISH PLAN AND FINISH LEGEND

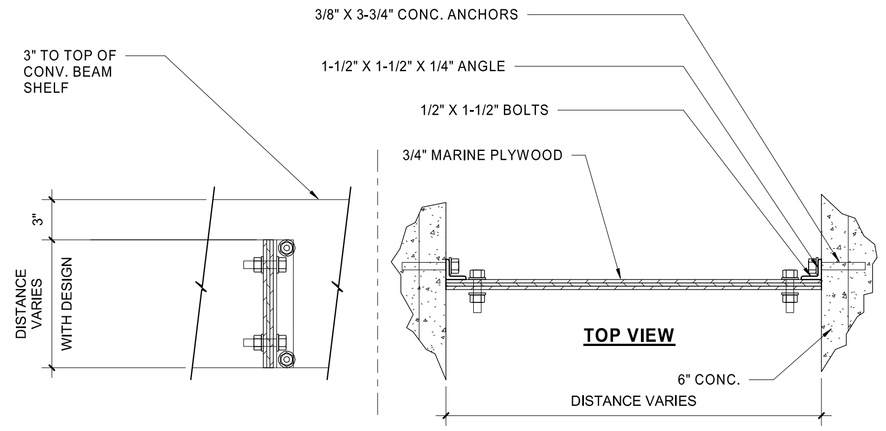
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1/10/2024 1:58:59 PM
C:\Users\meghan.davis\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_ARCH_V22_HFA.Meghan.Davis.rvt
A120-FLOOR FINISH PLAN AND FINISH LEGEND

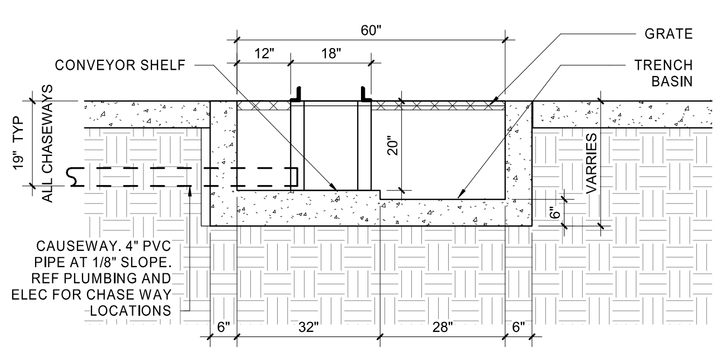
5.2D - PLAN SET

TRENCH NOTE:

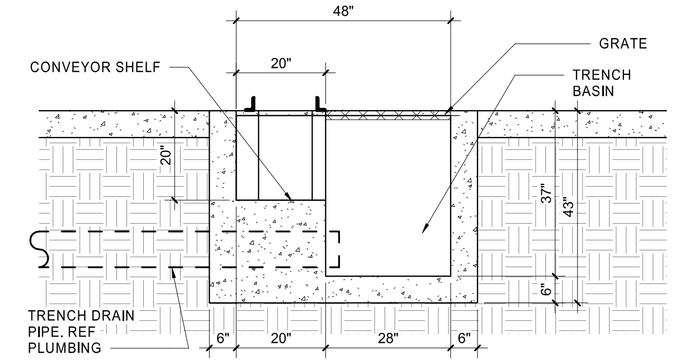
THE TRENCH IS DESIGNED TO FLOW ALL WATER AND MATERIALS INTO THE RECLAIMED AND OIL/SAND SEPARATOR. THE DRAINPIPE IS AT THE BOTTOM OF THE FLOW LINE OF THE TRENCH TO CAPTURE AND FLOW TO RECLAIM TANKS AND SEPARATOR



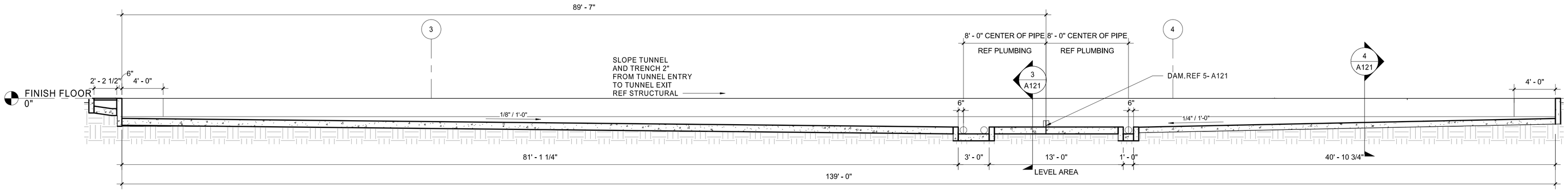
5 TRENCH DAM SECTION
1 1/2" = 1'-0"



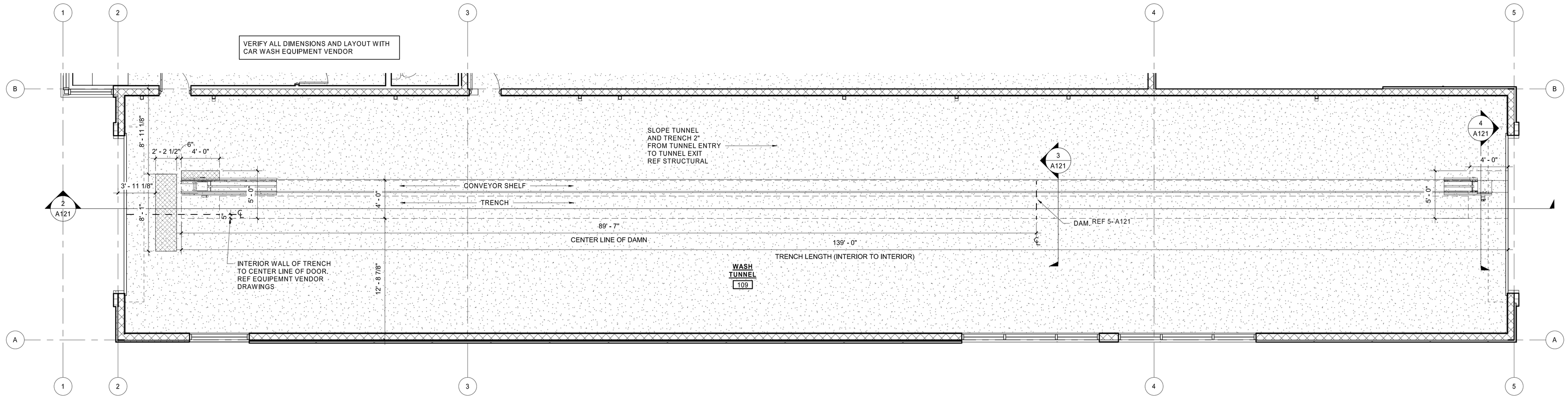
4 TRENCH SECTION AT END
1/2" = 1'-0"



3 TRENCH SECTION AT LEVEL AREA
1/2" = 1'-0"



2 LONG TRENCH SECTION
3/16" = 1'-0"



1 TRENCH PLAN
3/16" = 1'-0"

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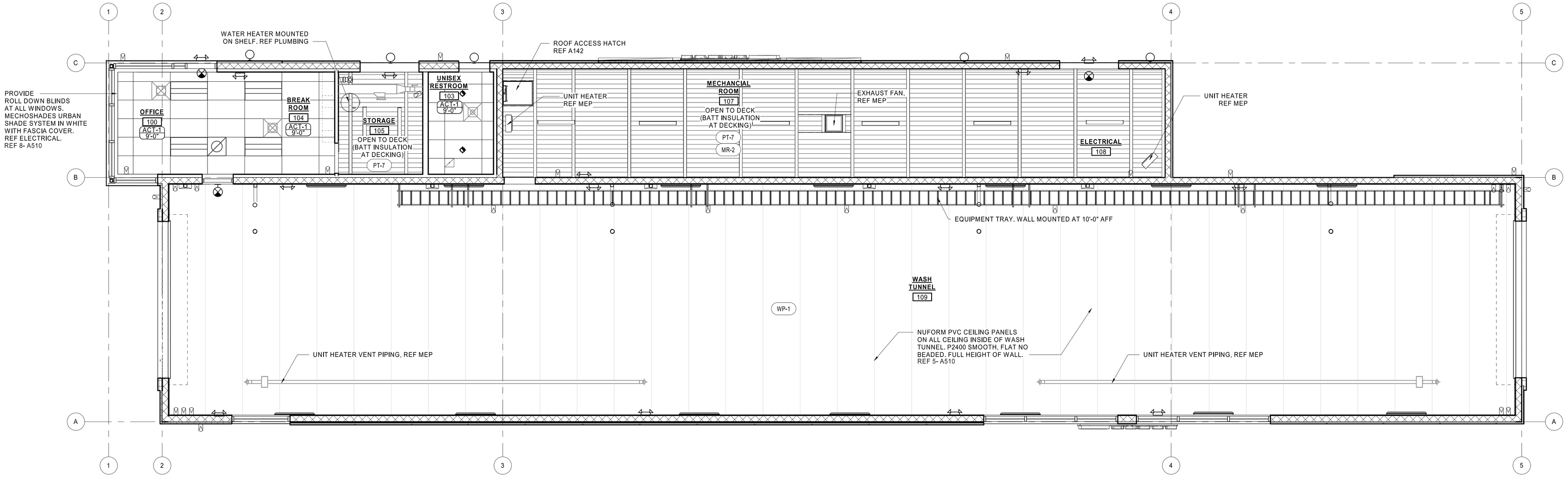
5.2D - PLAN SET

CEILING NOTES

1. GC SHALL LOCATE HVAC DIFFUSERS AND RETURNS AS SHOWN ON REFLECTED CEILING PLAN AND MECHANICAL PLAN.
2. MECHANICAL ROUTING IN CEILING TO BE COORDINATED BY GC AROUND LIGHTING LAYOUT. REF ELECTRICAL.
3. REFER TO SHEET A120 FOR MATERIAL LEGEND.
4. MOUNTING HEIGHT OF CEILING LIGHTS AND HVAC GRILLES TO BE AT ROOM CEILING HEIGHT, TYP UNO.
5. WALL MOUNTED LIGHTS IN WASH TUNNEL 10'-0" AFF

CEILING LEGEND

- FINISH / ACT / 11' - 0" / HEIGHT — CEILING FINISH AND HEIGHT TAG INDICATOR
- 48"x24" RECESSED LED TROFFER. REF LIGHTING PLAN AND SCHEDULE
- SURFACE MOUNTED / SUSPENDED LED TROFFER. REF LIGHTING PLAN AND SCHEDULE
- SUPPLY GRILLE. REF HVAC PLAN AND SCHEDULE
- RETURN GRILLE. REF HVAC PLAN AND SCHEDULE
- EXHAUST GRILLE. REF HVAC PLAN AND SCHEDULE
- SURFACE MOUNTED LED FIXTURE. REF LIGHTING PLAN AND SCHEDULE
- RECESSED CAN LIGHT. REF LIGHTING PLAN AND SCHEDULE
- EXTERIOR LIGHT. REF LIGHTING PLAN AND SCHEDULE
- EMERGENCY EXIT LIGHT FIXTURE. REF LIGHTING PLAN AND SCHEDULE
- EMERGENCY WALL MOUNTED LIGHT FIXTURE. REF LIGHTING PLAN AND SCHEDULE
- OSCILLATING FAN. REF MECHANICAL
- UNIT HEATER. REF MECHANICAL
- SECURITY MONITORS. REF ELECTRICAL



1 REFLECTED CEILING PLAN
3/16" = 1'-0"

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8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

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DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

ARCHITECTS
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Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:46:19-06'00'
License #: 55742

REFLECTED CEILING PLAN

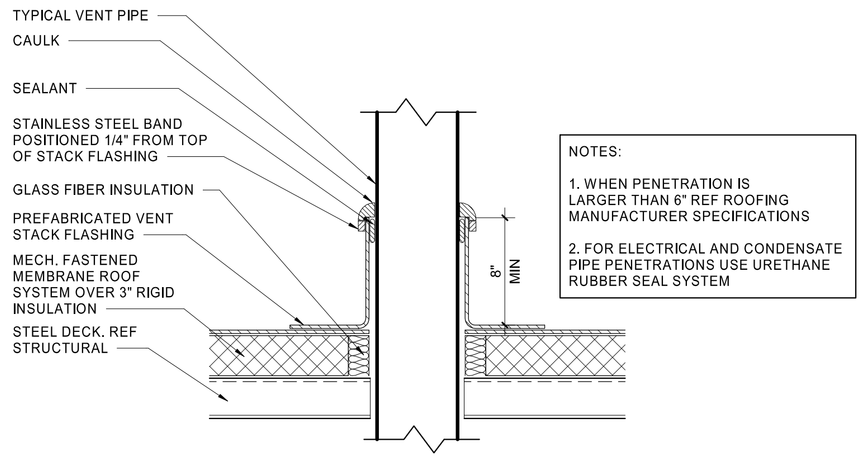
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C:\Users\meghan.davis\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_ARCH_V22_HFA.Meghan.Davis.rvt
A130-REFLECTED CEILING PLAN

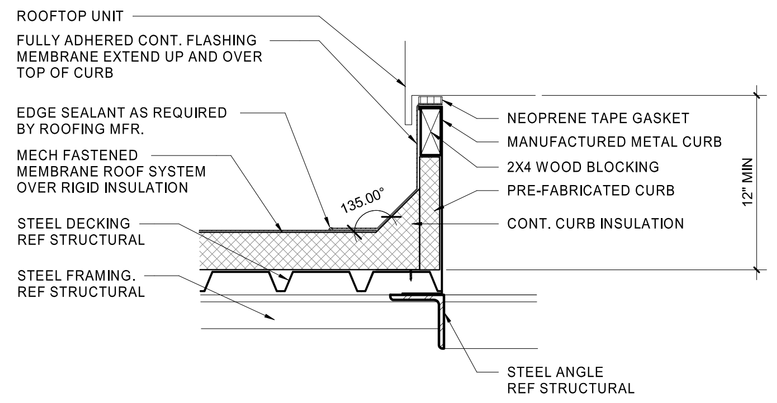
5.2D - PLAN SET

ROOF NOTES

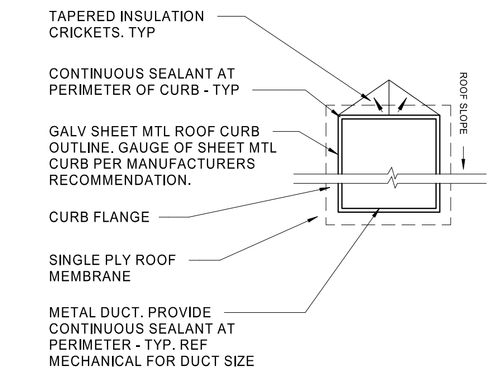
1. PROVIDE STRUCTURAL SUPPORT FOR HVAC UNITS AS MAY BE REQUIRED.
2. ALL CONDUIT AND PIPING PENETRATIONS THROUGH TPO ROOF MEMBRANE SHALL BE SEALED WITH MATERIALS APPROVED BY THE ROOF SYSTEM MANUFACTURER TO MAINTAIN ROOF SYSTEM WARRANTY.
3. PROVIDE CRICKETS AT HIGH SIDE OF ALL MECH. EQUIPMENT ON ROOF AS INDICATED IN DRAWINGS.
4. USE TAPERED INSULATION TO SLOPE ROOF TO SCUPPERS AND DOWNSPOUTS



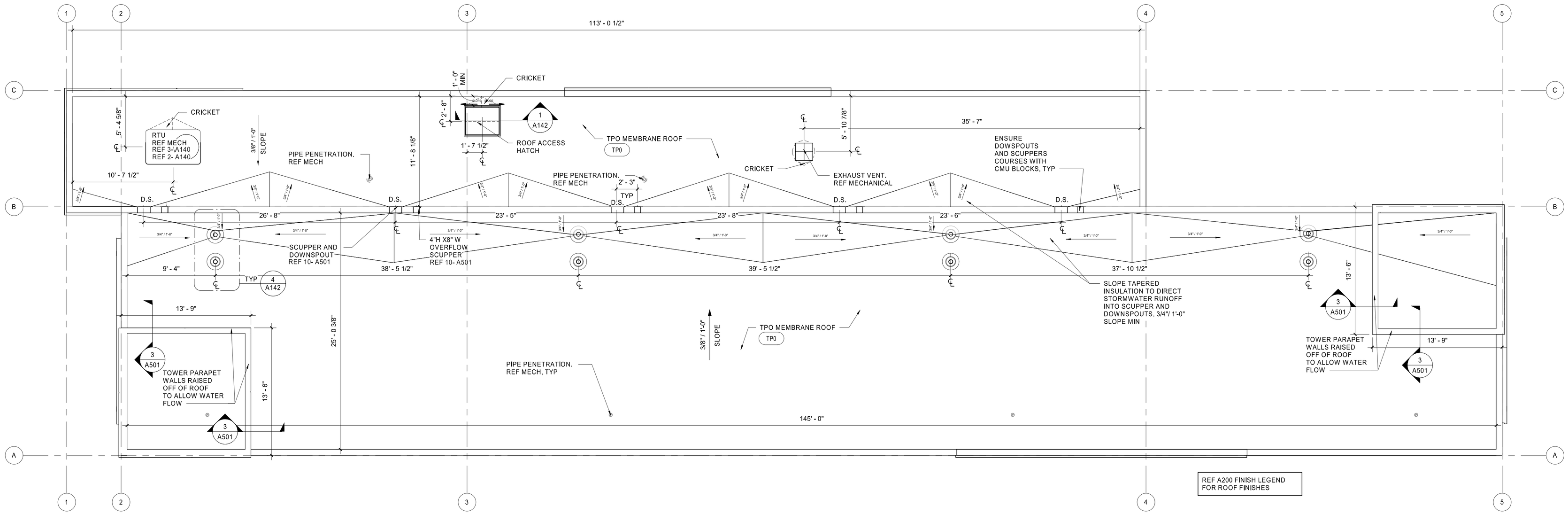
4 ROUND PENETRATION
NTS



3 ROOF CURB DETAIL
1 1/2" = 1'-0"



2 ROOF CURB AT DUCT PENETRATION THROUGH ROOF
NTS



1 ROOF PLAN
3/16" = 1'-0"

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BROOKLYN PARK, MN 55443
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ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	JMC
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DOCUMENT DATE:	01/10/24

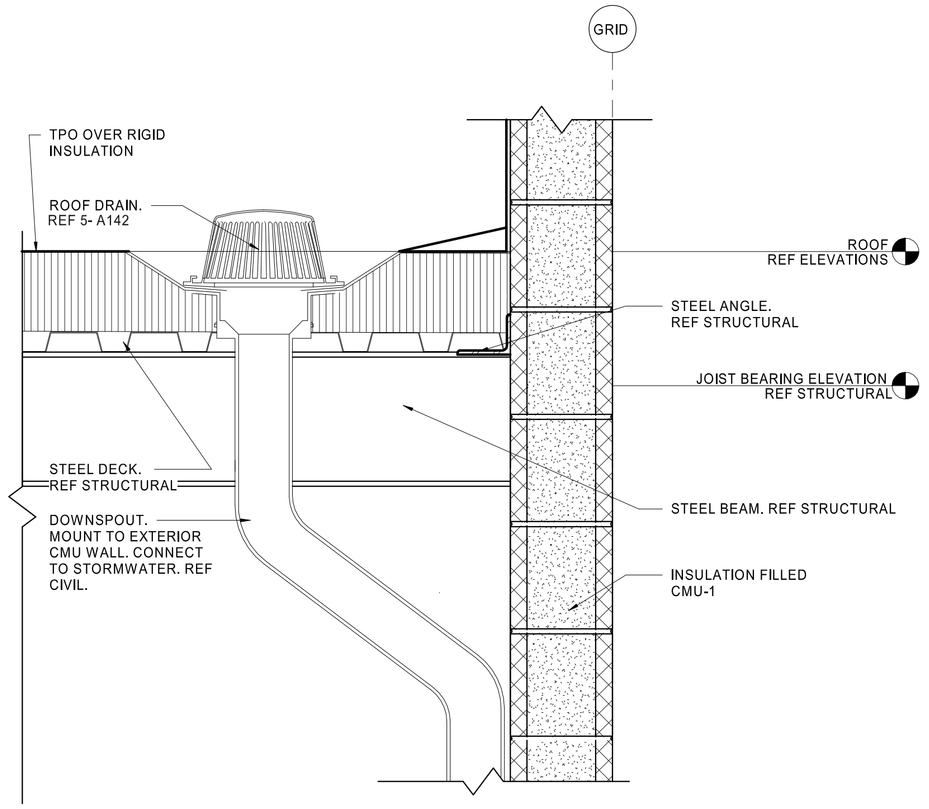
ARCHITECTS
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota
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Signature:
Date: 2024.01.10 14:48:21-06'00'
License #: 55742

ROOF PLAN

SHEET:
A140

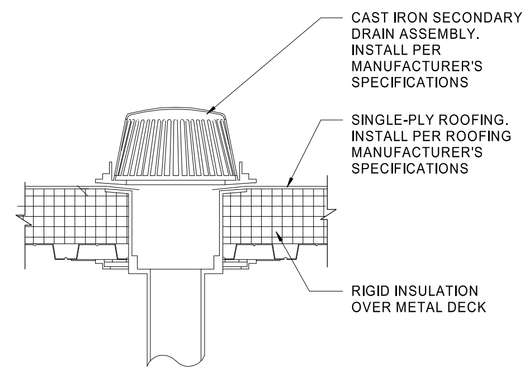
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A140 ROOF PLAN

5.2D - PLAN SET



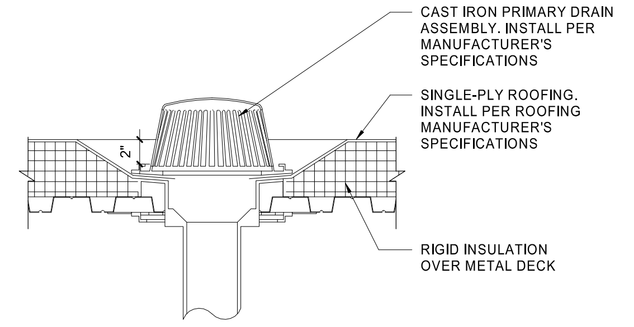
7 PRIMARY ROOF DRAIN DETAIL

1 1/2" = 1'-0"



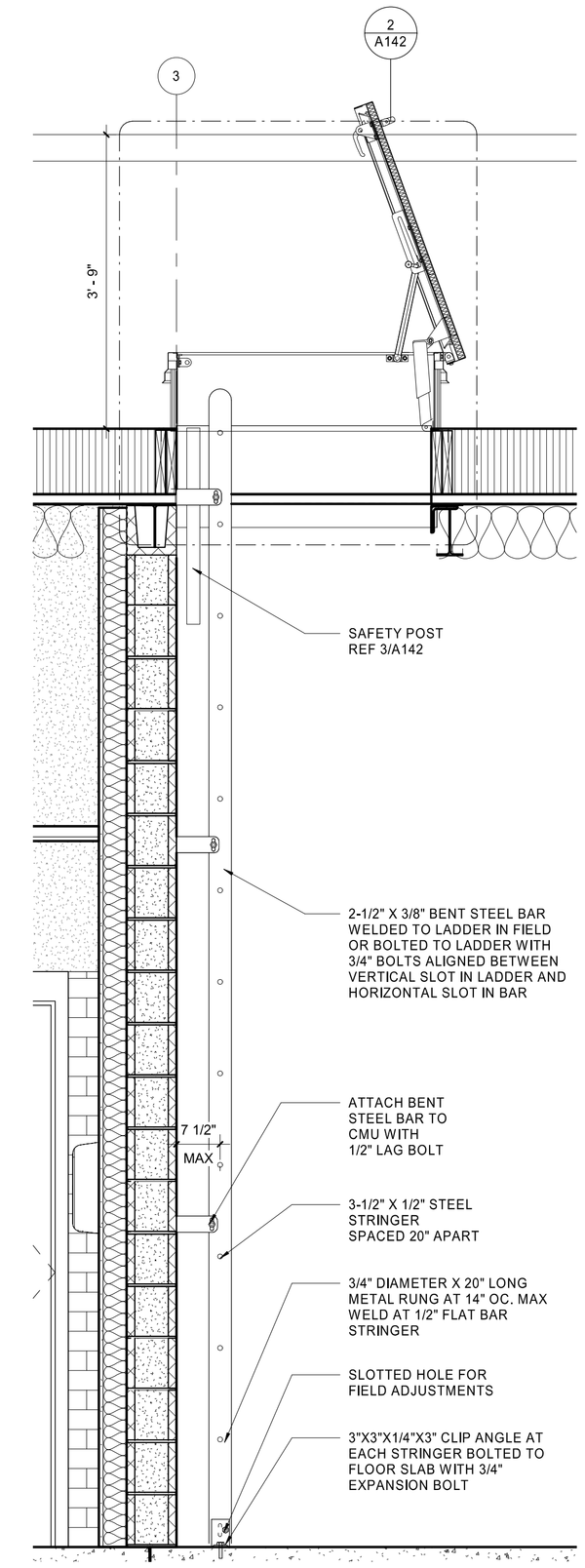
6 SECONDARY INTERNAL ROOF DRAIN

1 1/2" = 1'-0"



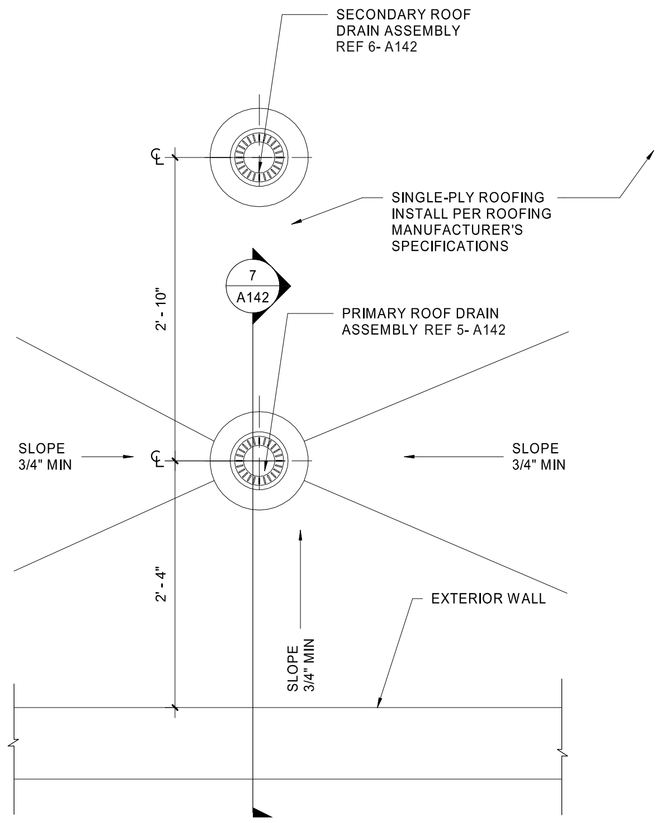
5 INTERNAL ROOF DRAIN

1 1/2" = 1'-0"



1 ROOF LADDER SECTION

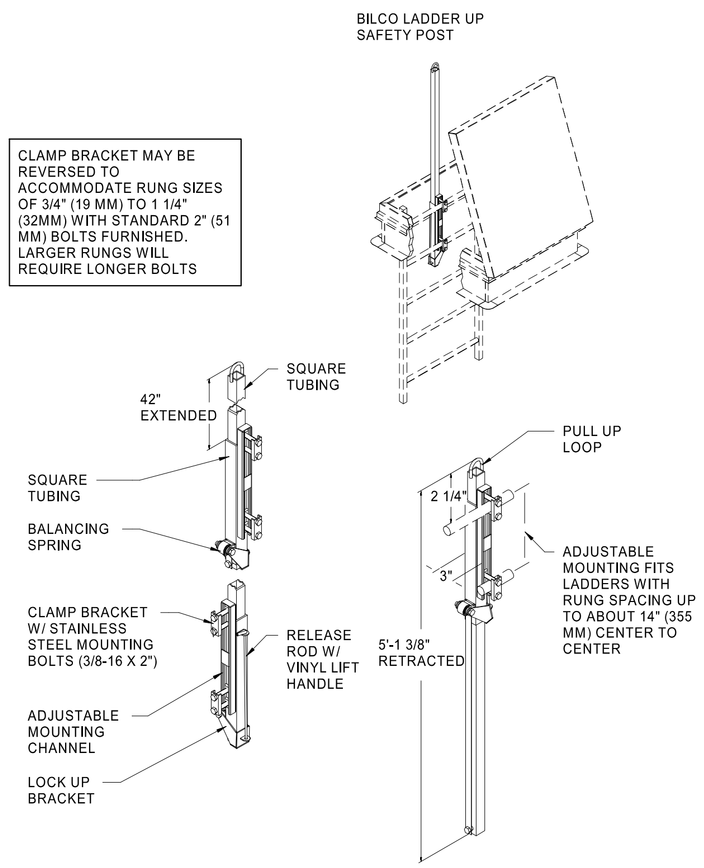
3/4" = 1'-0"



4 ROOF DRAIN PLAN DETAIL

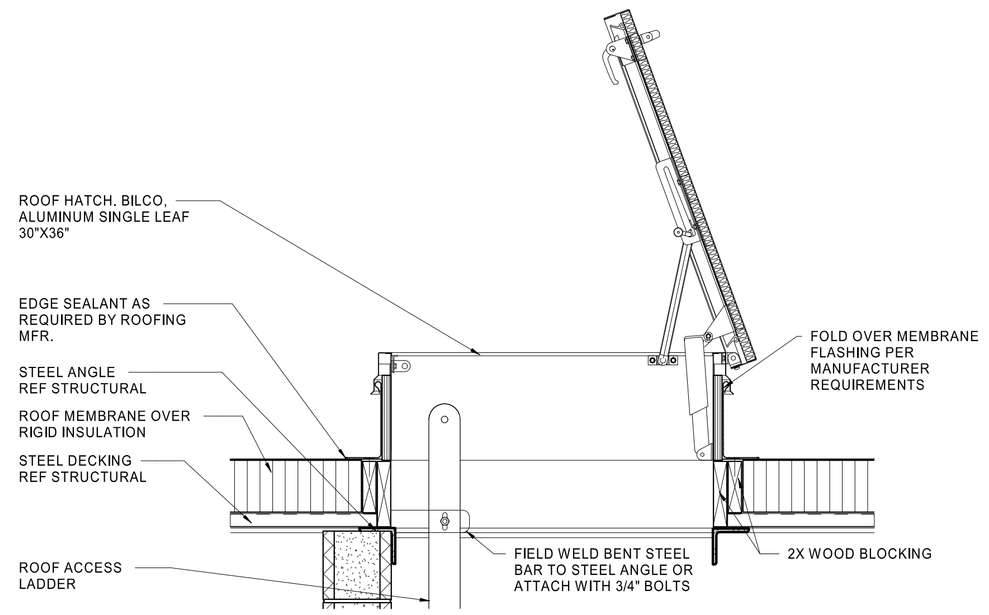
1" = 1'-0"

CLAMP BRACKET MAY BE REVERSED TO ACCOMMODATE RUNG SIZES OF 3/4" (19 MM) TO 1 1/4" (32MM) WITH STANDARD 2" (51 MM) BOLTS FURNISHED. LARGER RUNGS WILL REQUIRE LONGER BOLTS



3 SAFETY POST AT LADDER

N.T.S.



2 ROOF HATCH DETAIL

1" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

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DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

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Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:48:29-06'00'
License #: 55742

ROOF DETAILS

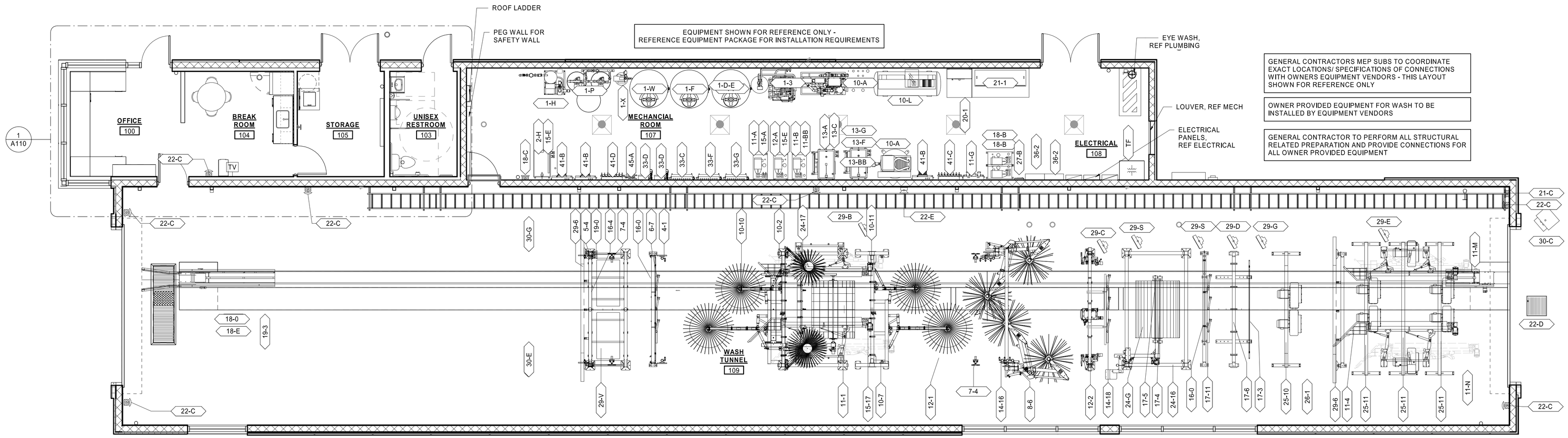
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A142-ROOF DETAILS

5.2D - PLAN SET

TUNNEL EQUIPMENT SCHEDULE	
MARK	DESCRIPTION
1-3	VRC 100 RECLAIM UNIT
1-D-E	R.O. SYSTEM
1-F	R.O. H20 TANK
1-H	REPRESSURIZATION P.
1-P	H20 SOFTENER
1-W	REFECT H20 TANK
1-X	R.O. REJECT PUMP
2-H	D-10 STAND & CONT. (SINGLE UNIT)
4-1	BUG CLEANER
5-4	APPLICATOR #1 APA 100 (MOUNTED)
5-8	UNDER CARRIAGE
6-7	(FOAMINATOR)
7-4	CTA MR.FOAMER
8-6	LUB. FOAMER SHOWER HEAD
10-2	WRAP AROUND (LEGS)
10-7	WRAP FOAMER TUBE
10-10	WRAP ENTRY DOUBLE JOG HYDRAULIC
10-11	WRAP EXIT DOUBLE JOG HYDRAULIC
10-A	AIR COMPRESSOR
10-L	AIR DRYER 50.CFM
11-1	TIRE BRUSH_COBRA
11-4	TIRE SEAL - 8 FS
11-A	TIRE BRUSH POWER PACK
11-B	WRAP BRUSH POWER PACK
11-BB	WRAP PP #2-7.5HP
11-G	TIRE LINK CONTROL PANEL
11-M	TIRE DRESSING MOTOR (DS)
11-N	TIRE DRESSING MOTOR (PS)
12-1	OMNI SINGLE SIDE
12-2	OMNI SINGLE TOP
12-A	OMNI PP 5HP
13-A	H-25 STAND & CONT. (SINGLE UNIT)
13-BB	H-25 STAND (DOUBLE UNIT)
13-C	H-25 WHEEL CLEANERS PUMP
13-F	H-25 WHEEL CLEANERS PUMP
13-G	H-25 OMNI PUMP SIDE (#2)
14-16	3 COLOR FOAMER (MR. FOAMER)
14-18	FUSION WAX (FOAMINATOR)
15-3	SIDE BRUSH BM-21"
15-17	GRILL BRUSH / BRIDGE (SFGRILL50)
15-A	SIDE BRUSH POWER PACK
15-E	COMBINATION POWER PACK
16-0	ALUMINUM ARCH
16-4	FINISHING ARCH - 4' (ARCADE SYSTEM)
17-3	SPOT FREE ARCH FOR (R.O./D.I.) SYS.
17-4	DRYING AGENT/RINSE WAX (ARCH)
17-5	FINAL RINSE (ARCH) RNS-100

TUNNEL EQUIPMENT SCHEDULE	
MARK	DESCRIPTION
17-6	MULTIPLE RAIN (ARCH-10')
17-11	FUSION WAX (FOAMINATOR)
18-0	CONVEYOR PIT
18-1	(8X2) CORRELATIOR PIT
18-B	CONVEYOR POWER UNIT
18-C	CONVEYOR AIR SOL.
18-E	GRATING, FIBERGLASS 1 - 1/2"
19-0	ENTRANCE EYE CONTROL BOX
19-3	ROLLER 4 WHL
20-1	TUNNEL CONTROLLER
21-1	MOTOR CONTROL CENTER (MCC)
21-C	ANTI COLLISION CONTROL BOX
22-A	ELECTRICAL EYE SENSORS
22-C	STOP/START STATIONS
22-D	ANTI COLLISION PAD
22-E	WARNING HORN
24-16	COMPACT TOP BRUSH
24-17	2K14 TOP BRUSH
24-G	TOP BRUSH MOTOR
25-10	BLOWER ARCH 144"
25-11	BLOWER ARCH 166" (QTY 3)
25-Y	BLOWER MOTOR NO, 8
26-1	STARGATE/VENTURY
26-2	BLOWER, MAMMOTH DRYER
26-4	BLOWER, INLET SILENCER (QTY 14)
27-B	SENSOR CONTROL BOX
29-6	GALAXY ARCH
29-B	UNDER CARRIAGE (SIGN)
29-C	COLOR FOAMER (SIGN)
29-D	SEALER WAX (SIGN)
29-E	TIRE SEAL (SIGN)
29-G	SPOT FREE (SIGN)
29-S	FUSION CERAMIC (SIGN)
29-V	ARCADE PANEL
30-C	(WAIT & GO) INSTRUCTIONAL SIGN
30-E	ENTRANCE INSTRUCTIONAL CABINET
30-G	PKG. RECEIVED SIGN
33-C	HYDRAFLEX PANEL #1
33-D	GRUNDFOS 20GPM
33-F	HYDRAFLEX PANEL #2
33-G	HYDRAFLEX PANEL #3
36-2	AUTOVAC IQ PANEL
41-B	AIR LINK PANEL
41-C	WATER LINK PANEL (CITY WATER)
41-D	WATER LINK PANEL (REJECT)
45-A	SINGLE DOSATRON PUMP STATION



1 EQUIPMENT PLAN

3/16" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

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EQUIPMENT PLAN & SCHEDULE

SHEET:
A150

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A150-EQUIPMENT PLAN & SCHEDULE

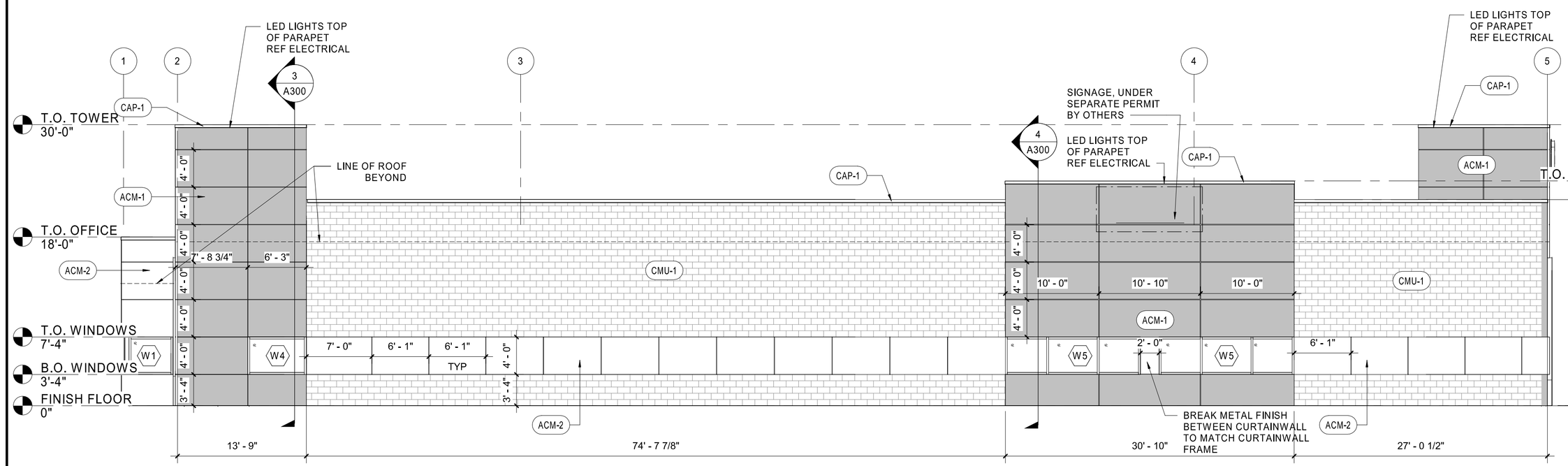
5.2D - PLAN SET

EXTERIOR FINISH SCHEDULE

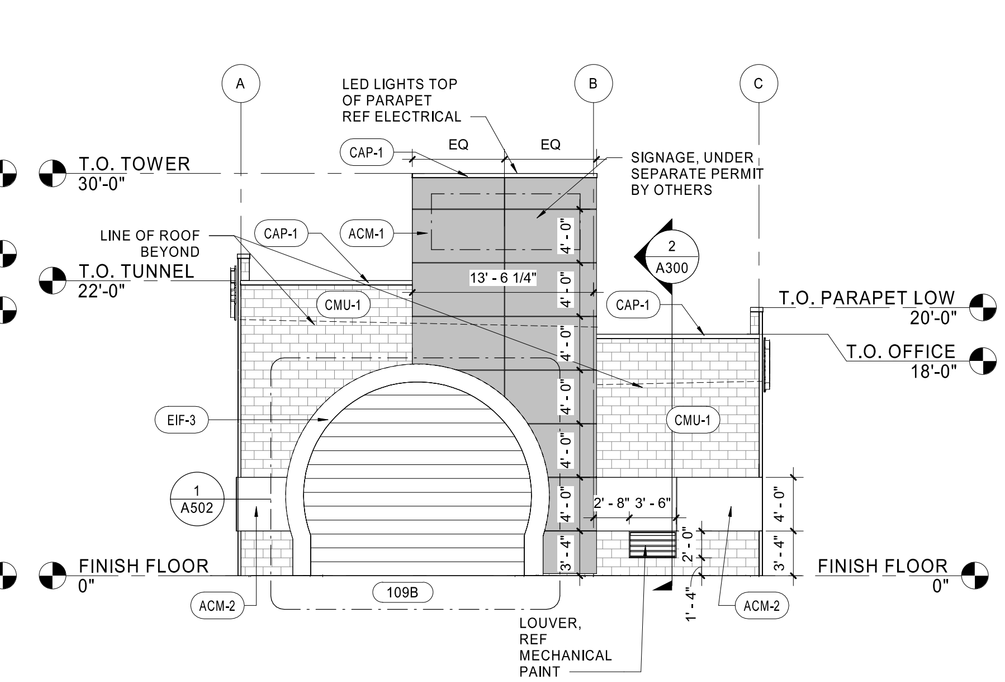
MARK	MATERIAL	MANUFACTURER	COLOR	NOTES
ACM-1	ACM PANEL	ALPOLIC/HD	COLOR TO MATCH PMS 15-4706 GRAY MIST	
ACM-2	ACM PANEL	ALPOLIC/HD	COLOR TO MATCH PMS 2757C	
CAP-1	PARAPET CAP		COLOR TO MATCH PMS 2757C	20 GA. METAL
CMU-1	8"X8"X16" SMOOTH FACE CMU	OLDCASTLE	WHITE LIMESTONE	MORTAR - SPEC MIX - SM250 ANTIQUE WHITE - WATER REPELLANT ADMIXTURE
EIF-3	EXTERIOR INSULATION FINISH SYSTEM	DRYVIT	COLOR TO MATCH PMS 2757C	
PT-1	PAINT	DUNN EDWARDS	FOGGY DAY DE6226	HM DOORS
PT-2	PAINT	DUNN EDWARDS	COLOR TO MATCH PMS 2757C	HM DOORS
TP0	MEMBRANE ROOFING	FIRESTONE	ULTRA PLY TPO 60 MIL - WHITE	15 YEAR WARRANTY OR EQUAL.

GENERAL NOTES

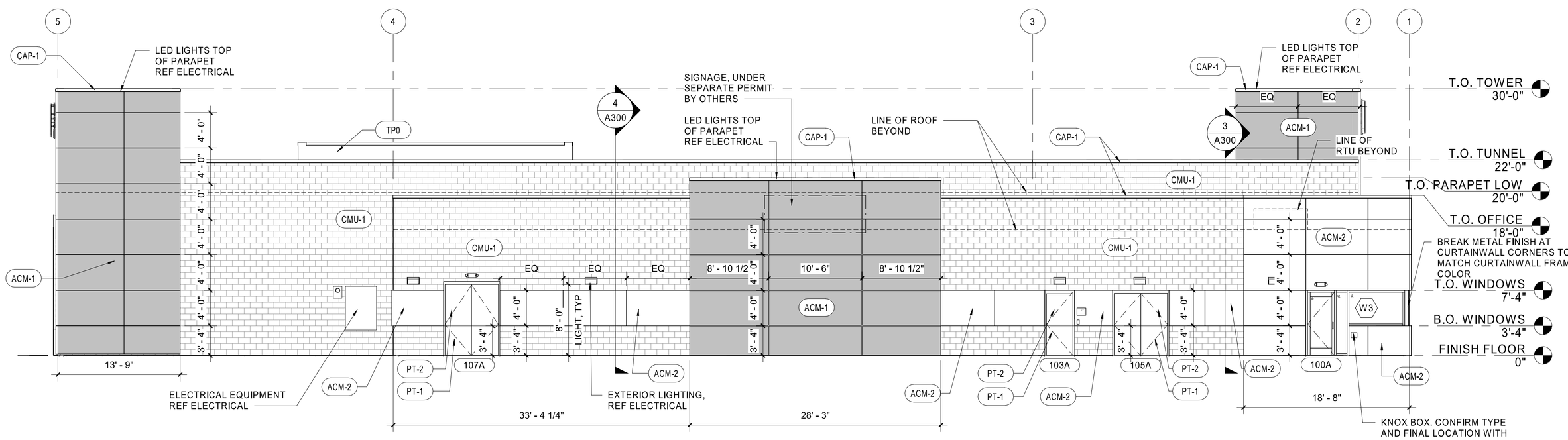
1. INSTALL CONTROL JOINTS PER MFR RECOMMENDATIONS.
2. ALL SIGNAGE WILL BE PERMITTED SEPARATELY
3. VERIFY WITH LOCAL JURISDICTION AND WIND SPEED REQUIREMENTS TO DETERMINE IF HURRICANE RATED/HIGH IMPACT STOREFRONT OR SIGNAGE IS REQUIRED. FURNISH AS REQUIRED
4. COORDINATE ANY REQUIRED KNOX BOXES WITH AHJ / FIRE MARSHAL FOR TYPE AND LOCATION
5. CMU CONTROL JOINTS AT 16'-0" OC MAX. REF ELEVATIONS FOR RECOMENDED PLACMENT
6. GC SHALL ENSURE THAT CMU SURFACE ARE CLEAN BEFORE INSTALLING EIFS AND STONE FINISHES



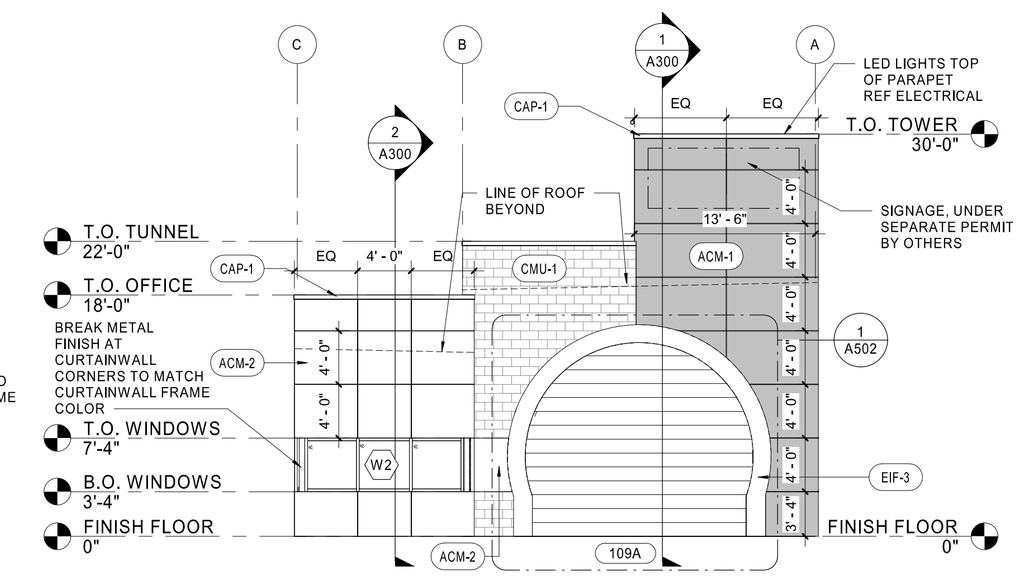
4 EXTERIOR ELEVATION
1/8" = 1'-0"



3 EXIT ELEVATION
1/8" = 1'-0"



2 EXTERIOR ELEVATION
1/8" = 1'-0"



1 ENTRANCE ELEVATION
1/8" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

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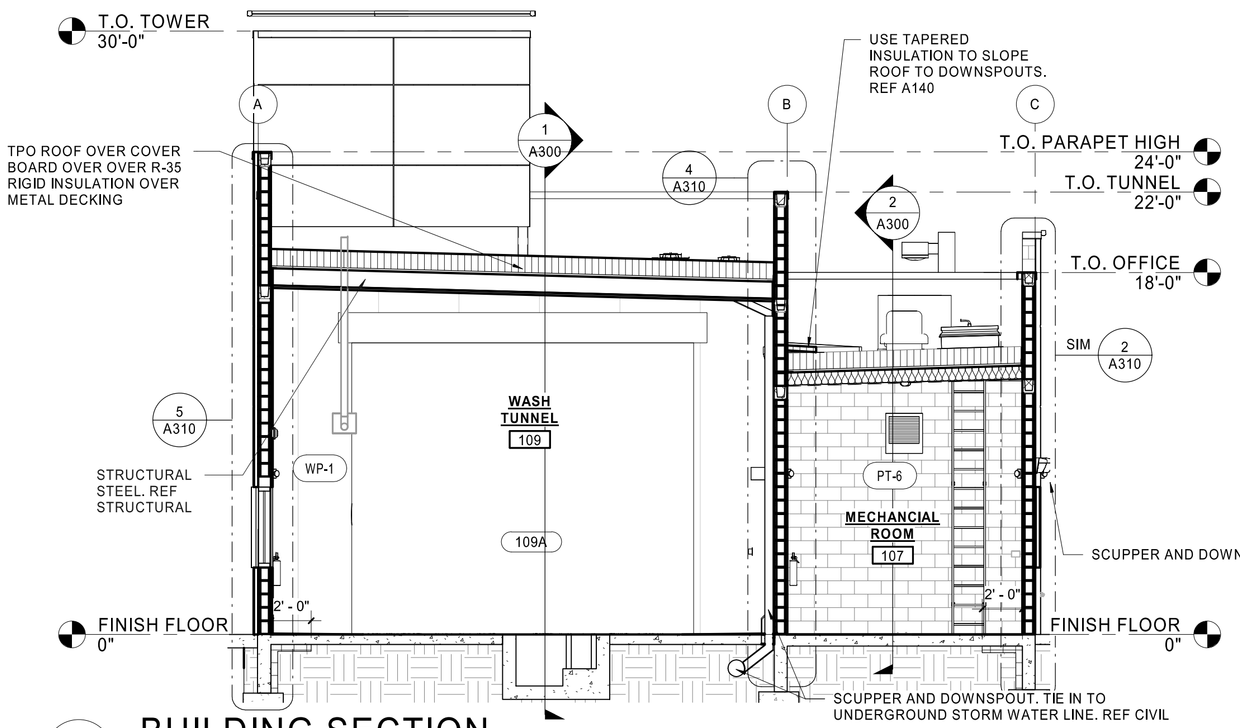
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EXTERIOR ELEVATIONS

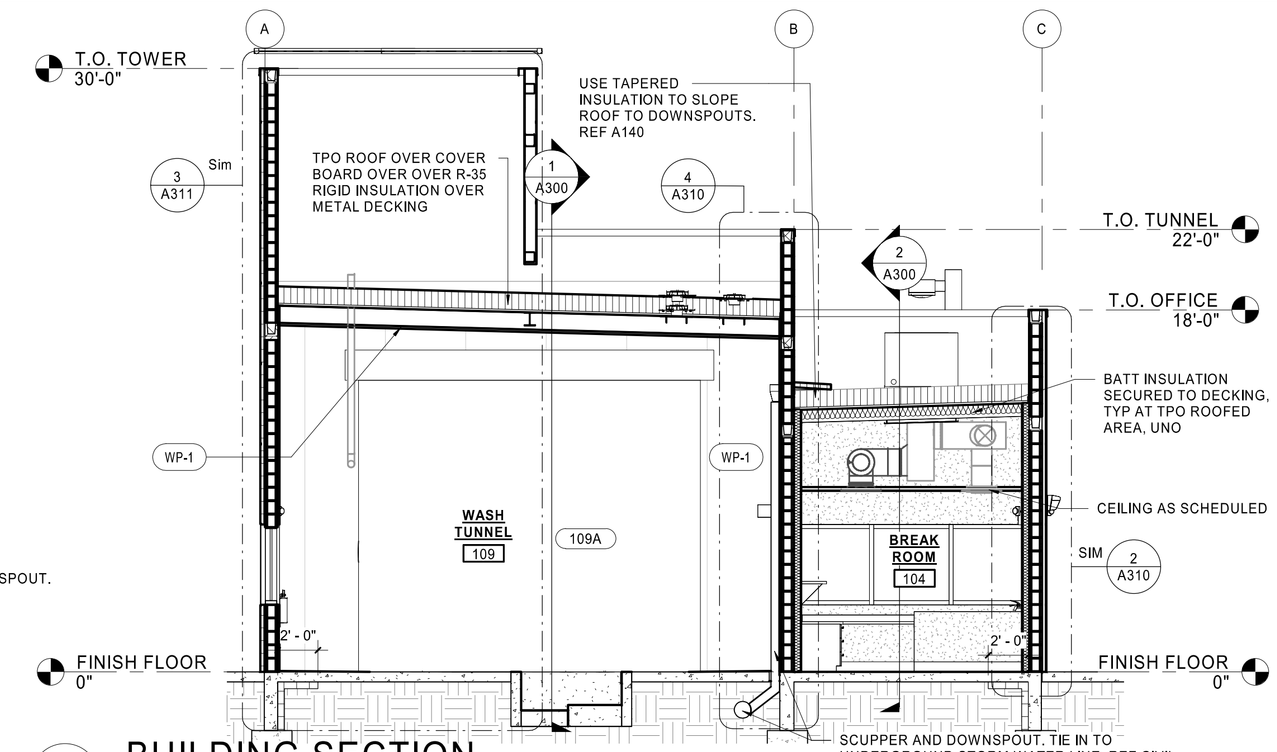
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A200-EXTERIOR ELEVATIONS

5.2D - PLAN SET

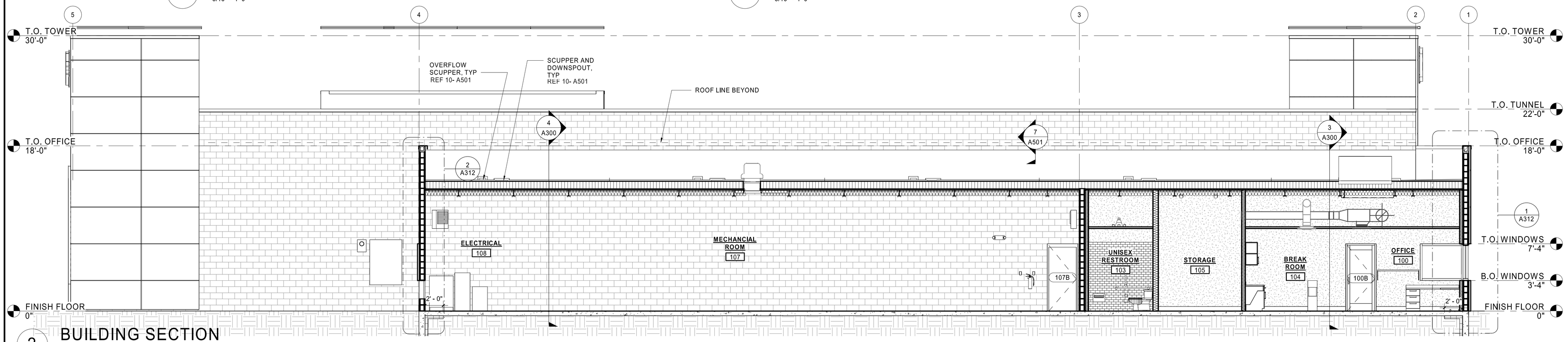


4 BUILDING SECTION
3/16" = 1'-0"

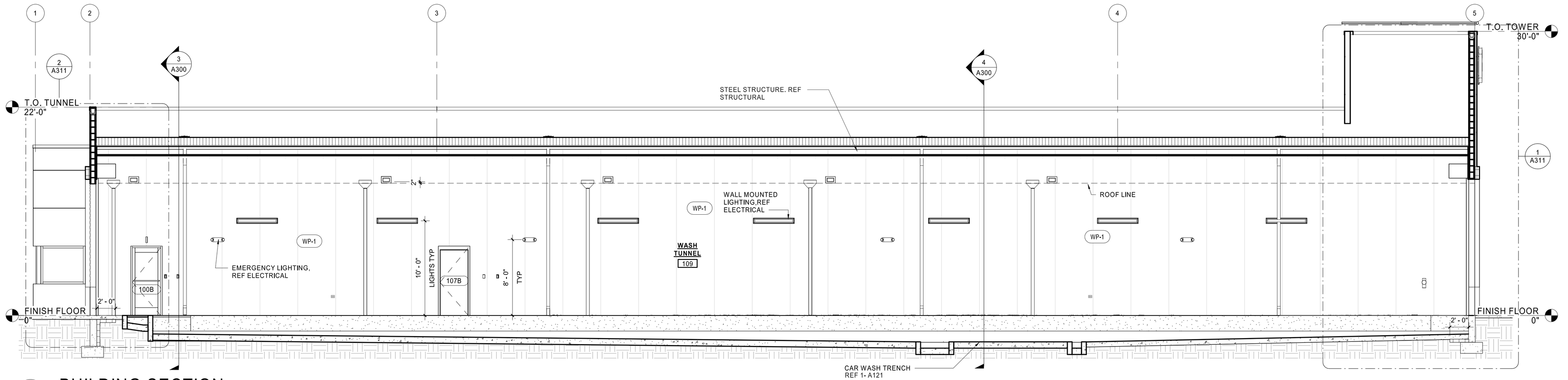


3 BUILDING SECTION
3/16" = 1'-0"

INSULATION NOTES		
LOCATION	TYPE	REMARKS
ROOF (UNDER DECKING)	R-49 (VINYL FACED)	SECURE TO UNDERSIDE OF ROOF DECKING AT AC CONDITIONED ROOMS
ROOF (ABOVE DECK)	R-35 (RIGID)	
WALL (EXTERIOR FURROUT)	R-13 3 1/2" BATT	R-19 FOR ANY 6" WALLS
WALL (INTERIOR FURROUT)	R-13 3 1/2" BATT	R-19 FOR ANY 6" WALLS
WALL (INTERIOR STUD)	R-13 3 1/2" BATT	R-19 FOR ANY 6" WALLS
WALL (EXTERIOR CMU BLOCK)	SPRAY FOAM (INSULSMART OR EQUAL) MIN R-VALUE OF 3.3	FILL ALL NON GROUTED CELLS OF ALL EXTERIOR WALLS
WALL (INTERIOR CMU BLOCK)	SPRAY FOAM (INSULSMART OR EQUAL) MIN R-VALUE OF 3.3	FILL ALL NON GROUTED CELLS OF ALL EXTERIOR WALLS
EXTERIOR	R-12.5 (RIGID)	WHERE INDICATED: BEHIND ACM PANELS
UNDERSLAB	R-20 (RIGID)	PERIMETER OF ENTIRE SLAB DOWN TO FOUNDATION, HORIZONTAL 24"



2 BUILDING SECTION
3/16" = 1'-0"



1 BUILDING SECTION
3/16" = 1'-0"

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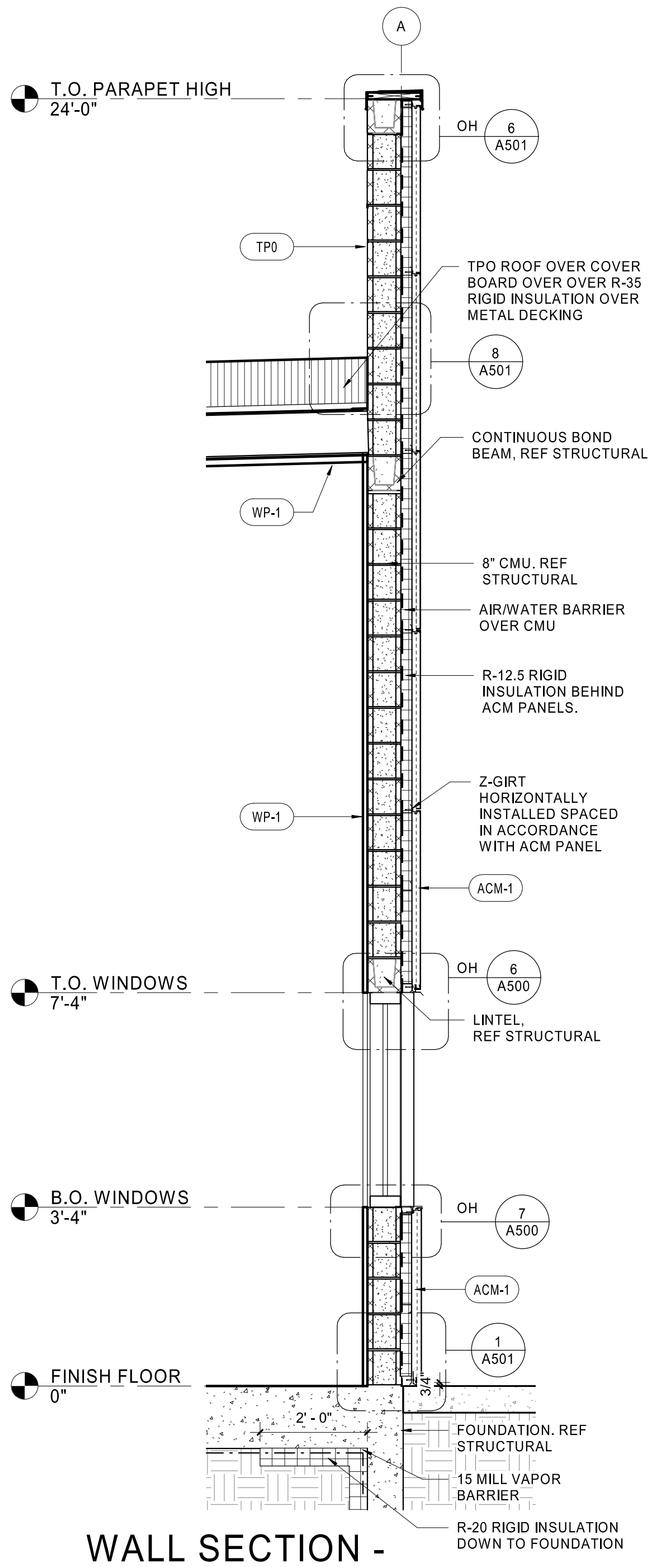
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BUILDING SECTIONS

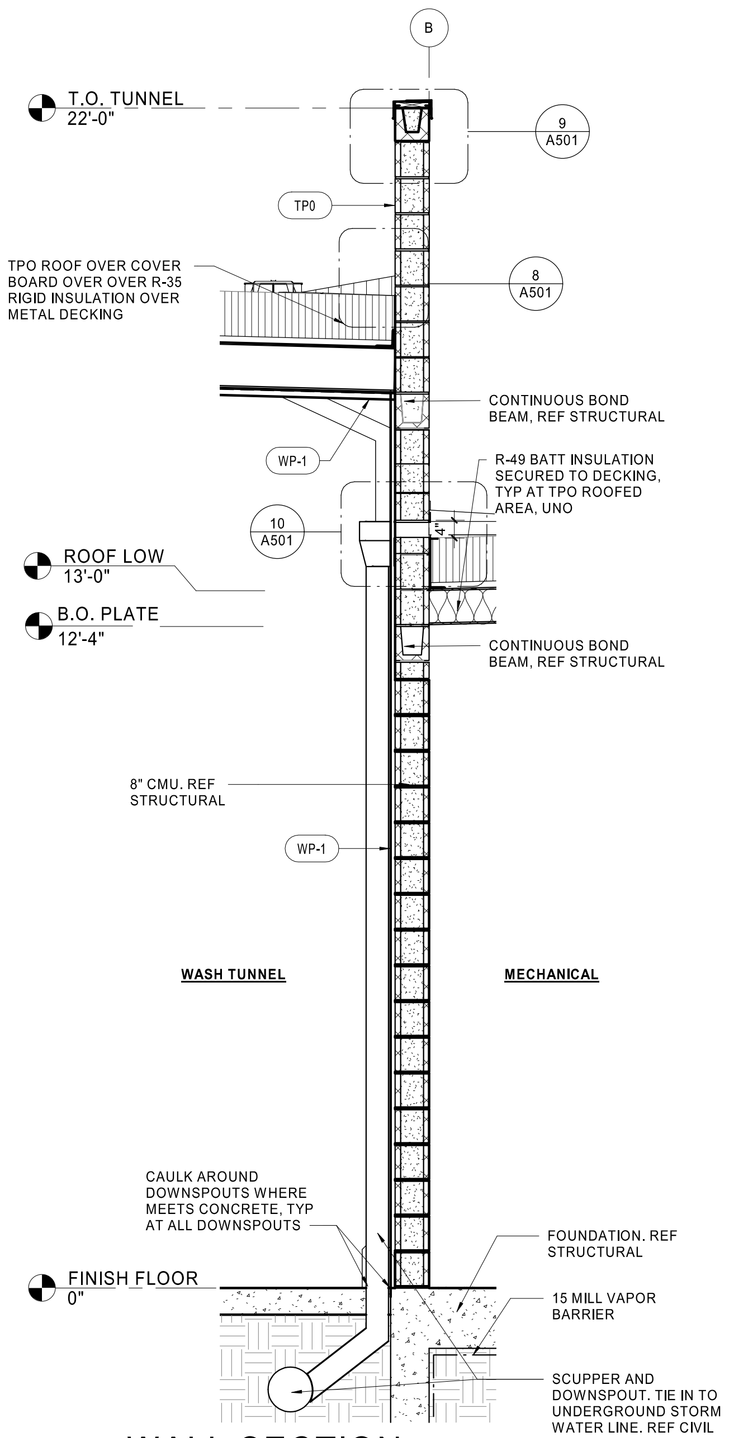
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A300-BldgSects.DWG SECTIONS

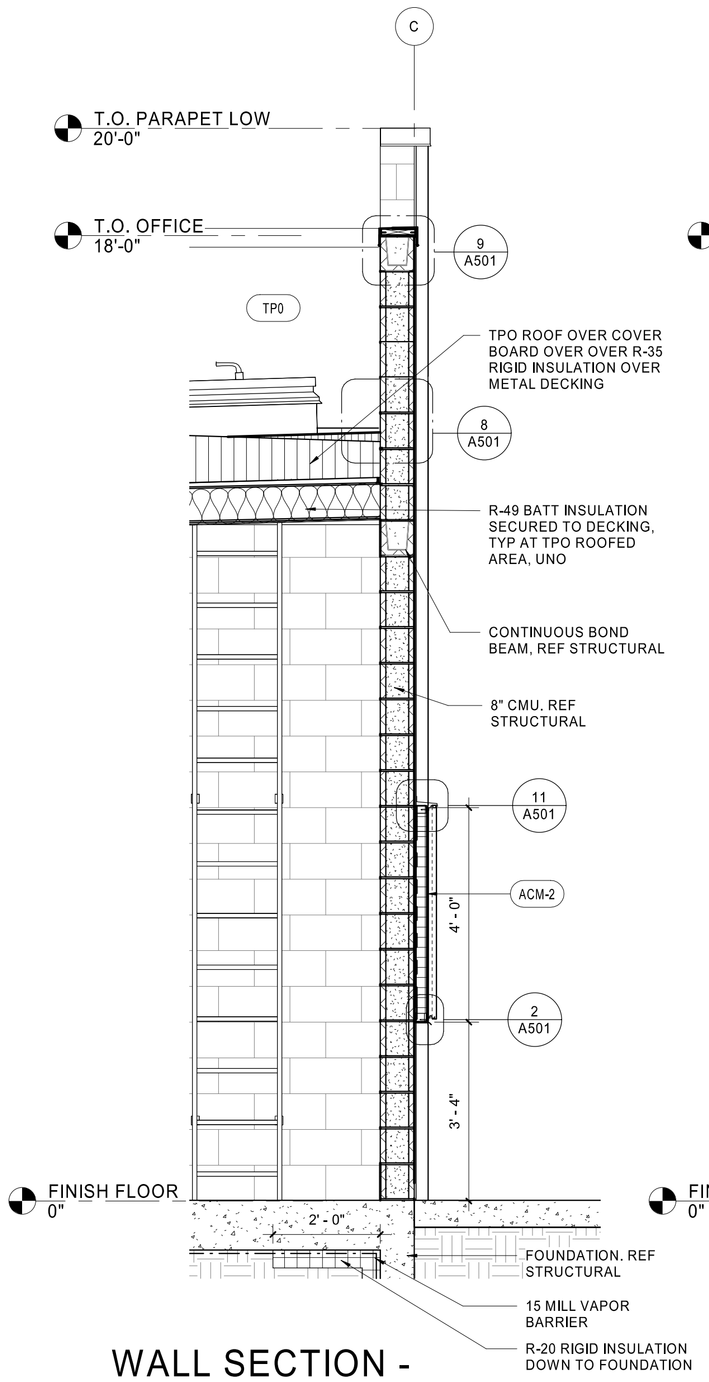
5.2D - PLAN SET



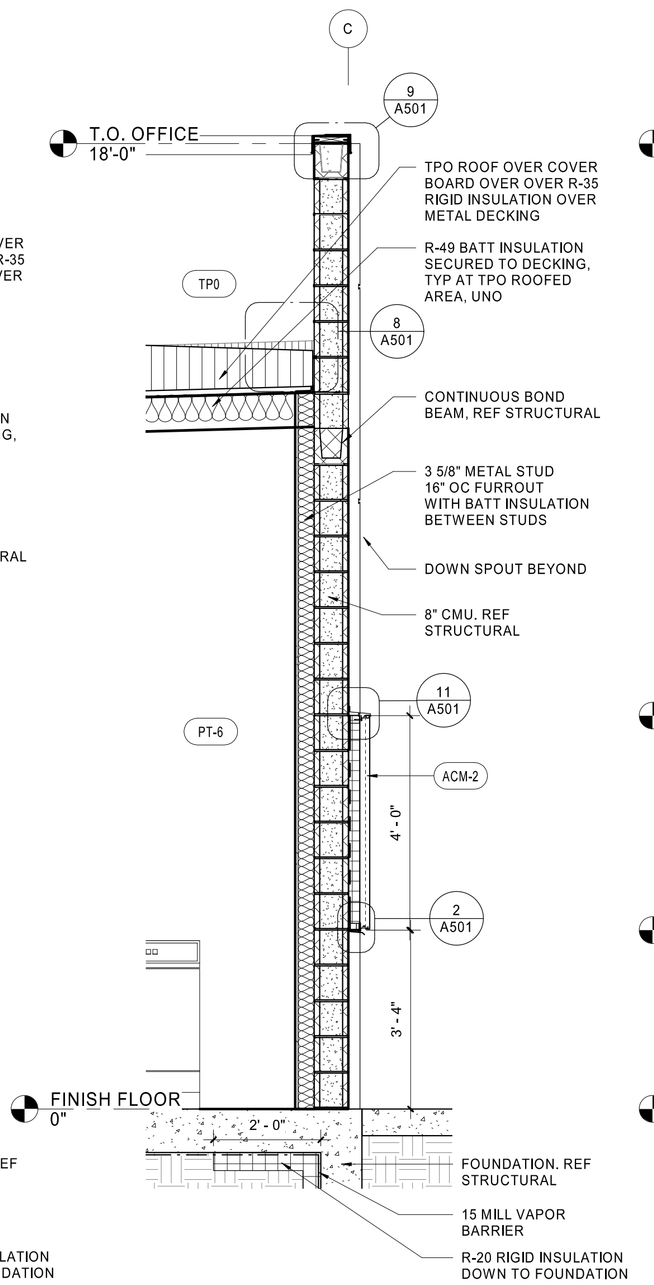
5 WALL SECTION - TUNNEL HIGH SIDE
1/2" = 1'-0"



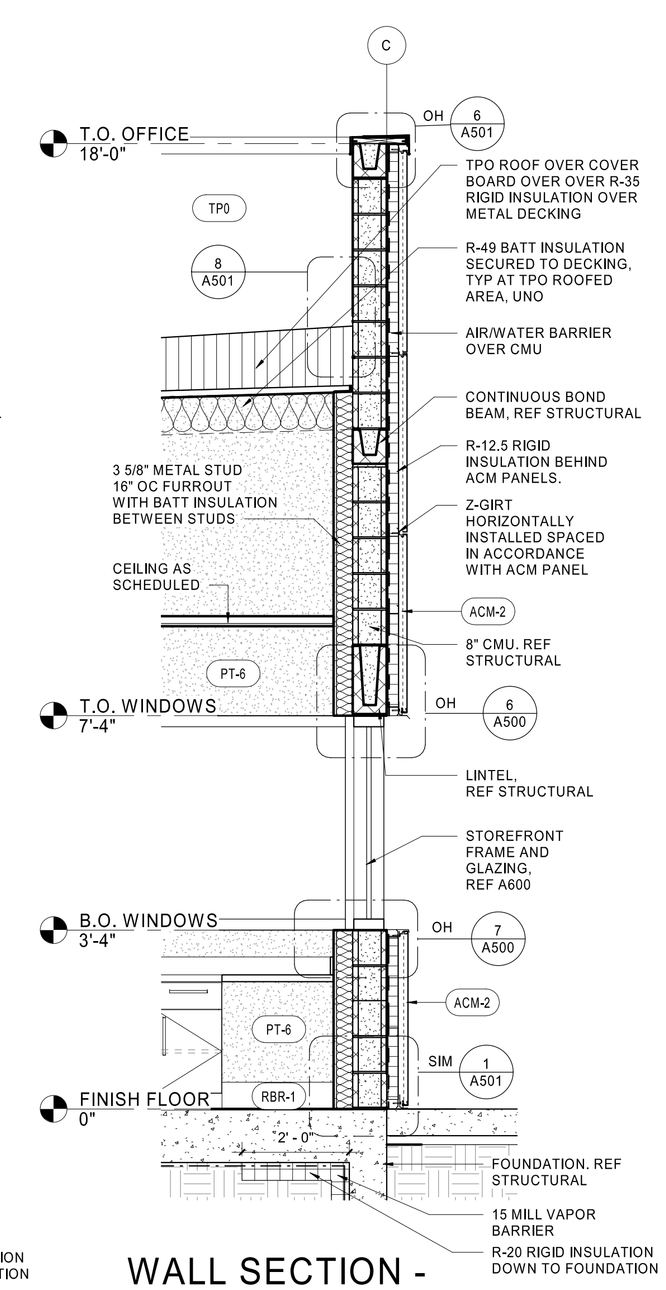
4 WASH TUNNEL LOW SIDE
1/2" = 1'-0"



3 EQUIPMENT ROOM
1/2" = 1'-0"



2 WALL SECTION
1/2" = 1'-0"



1 WALL SECTION - OFFICE HIGH SIDE
1/2" = 1'-0"

1/10/2024 1:59:29 PM
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A310-WALL SECTIONS

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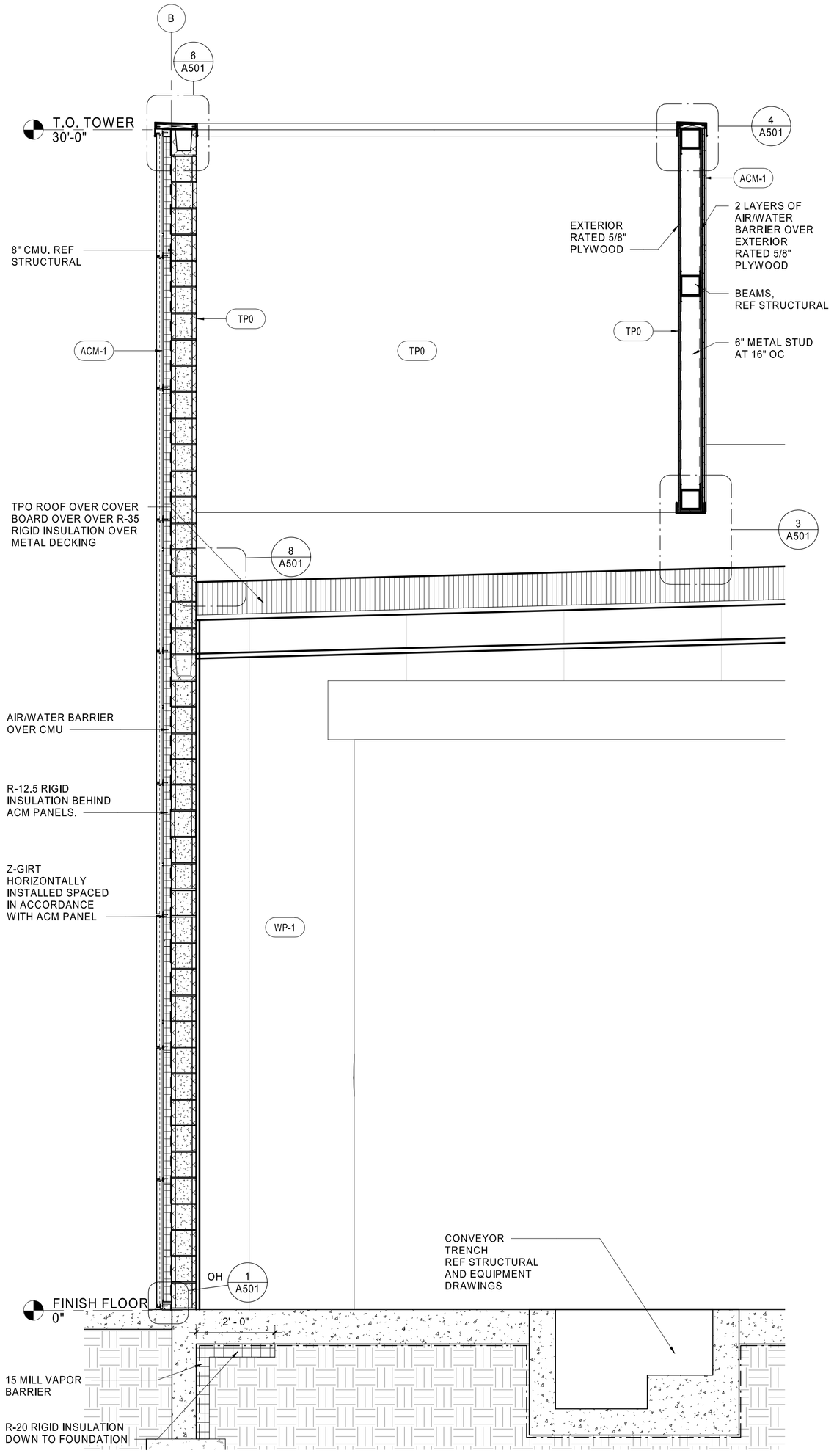
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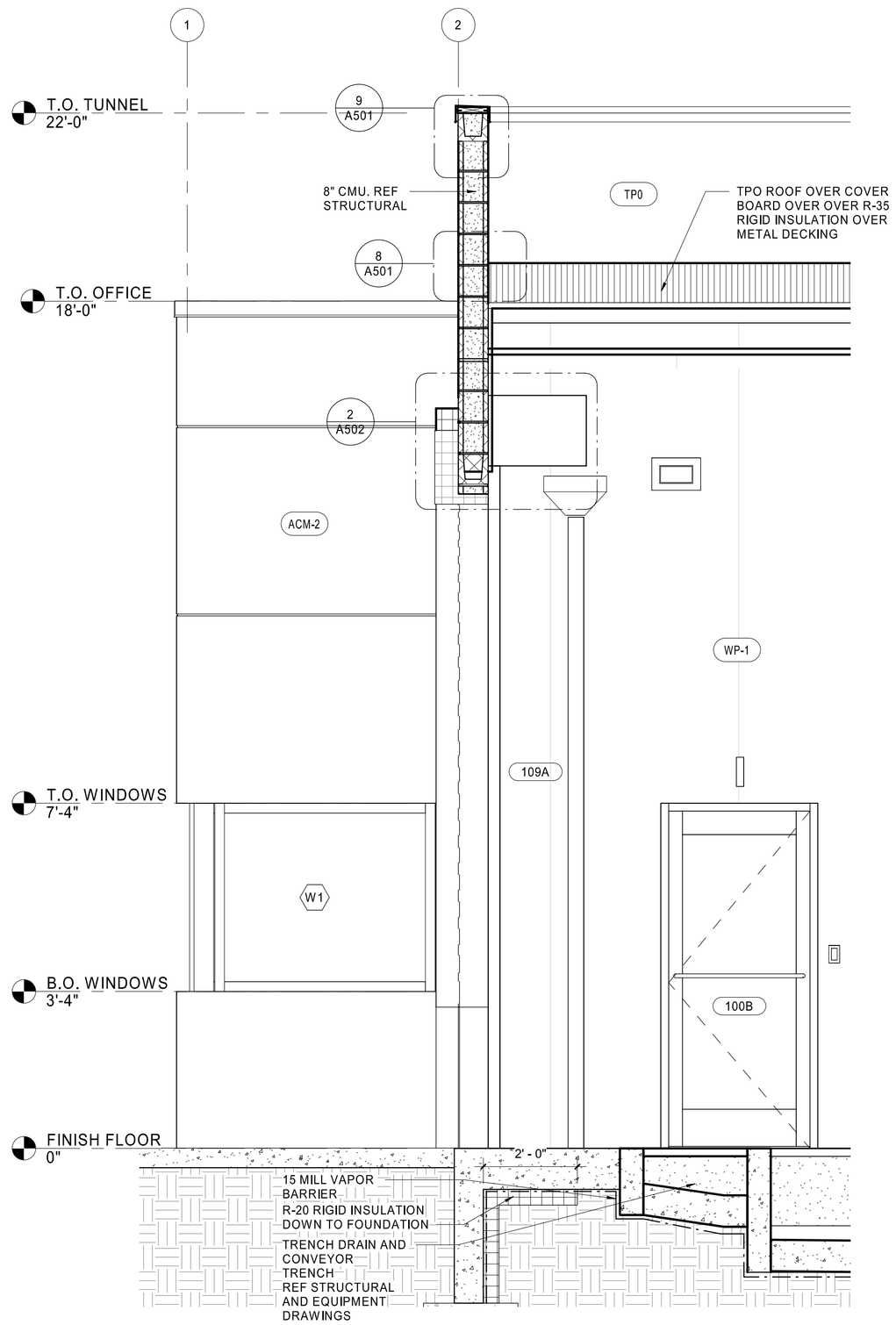
WALL SECTIONS

SHEET:
A310

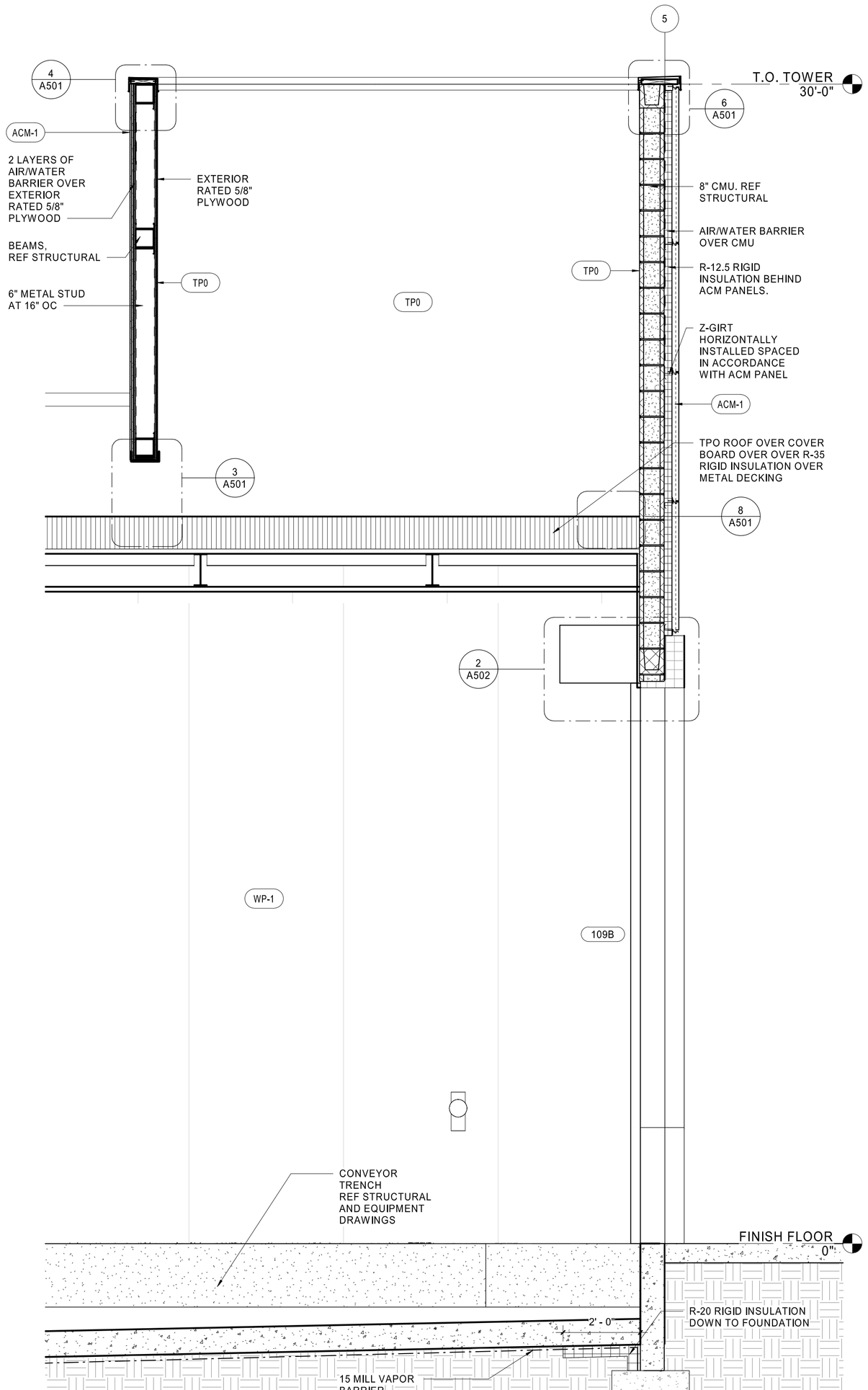
5.2D - PLAN SET



3 WALL SECTION - TOWER
1/2" = 1'-0"



2 WALL SECTION - TUNNEL ENTRY
1/2" = 1'-0"



1 WALL SECTION - TUNNEL EXIT
1/2" = 1'-0"

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

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DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

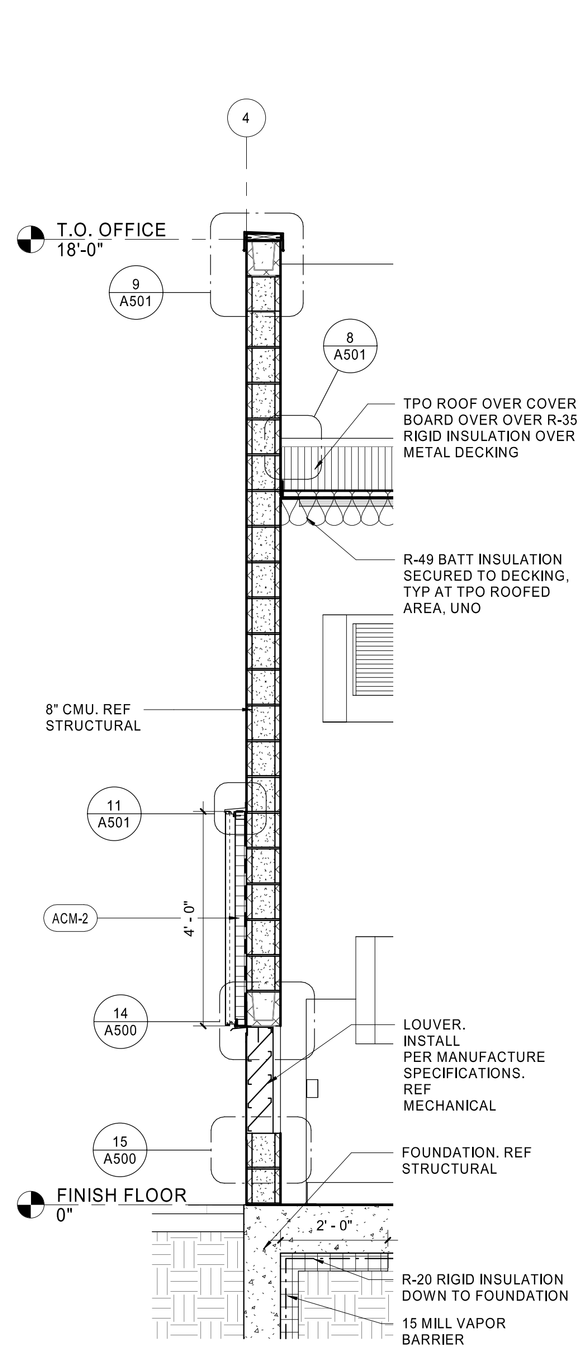
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Signature:
Date: 2024.01.10 14:49:11-06'00' License #: 55742

WALL SECTIONS

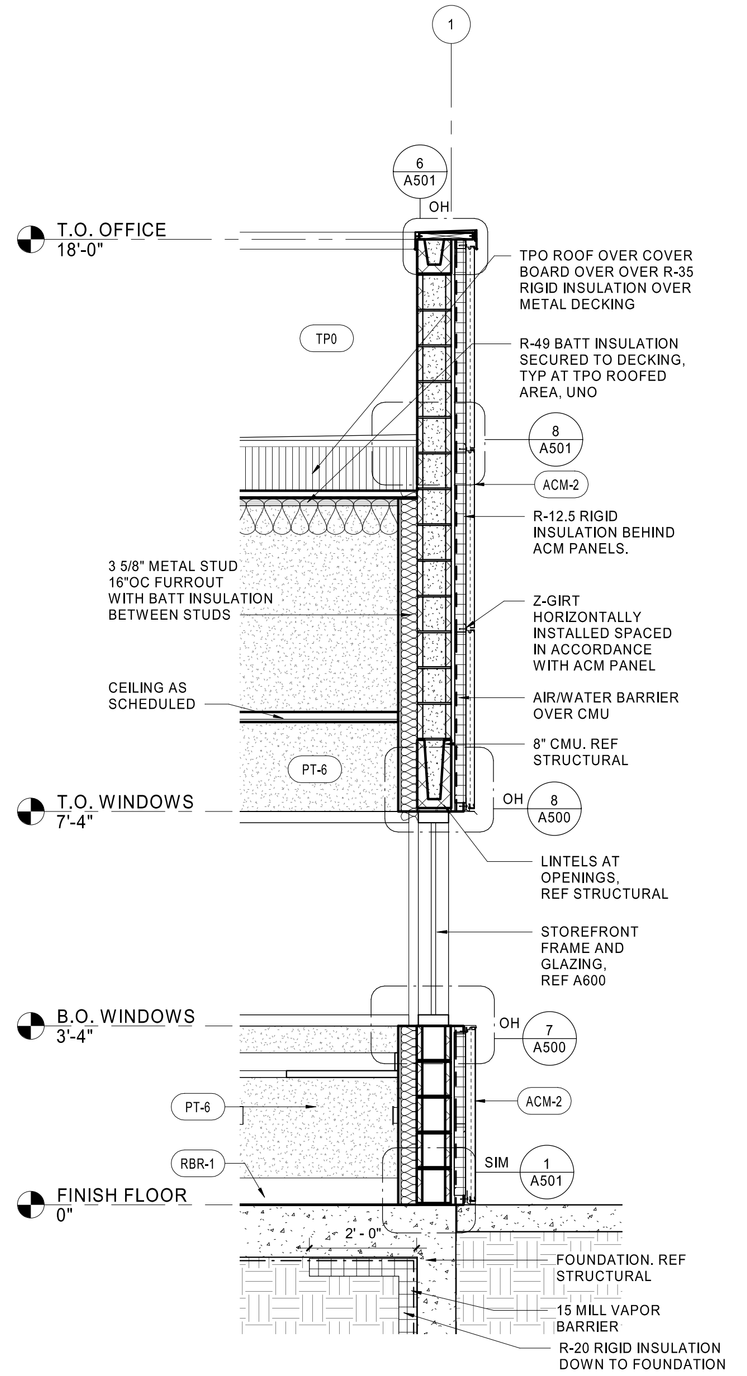
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A311-WALL SECTIONS

5.2D - PLAN SET



2 WALL SECTION - AT LOUVER
1/2" = 1'-0"



1 WALL SECTION - OFFICE
1/2" = 1'-0"

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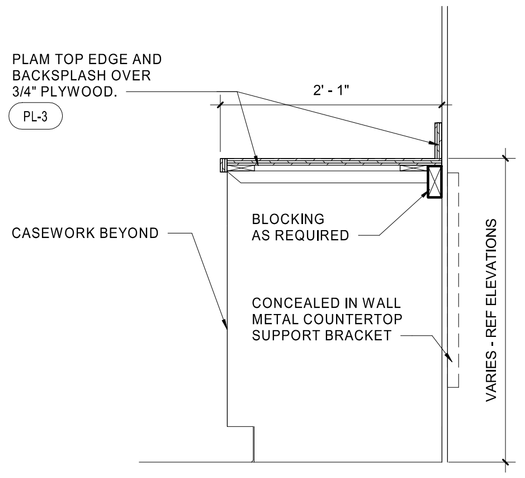
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WALL SECTIONS

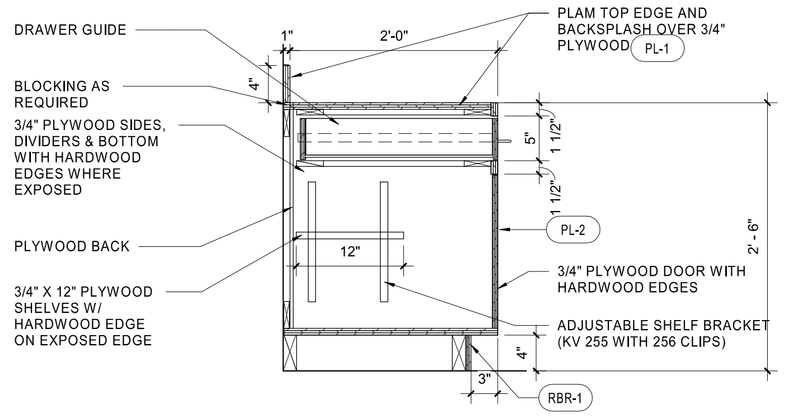
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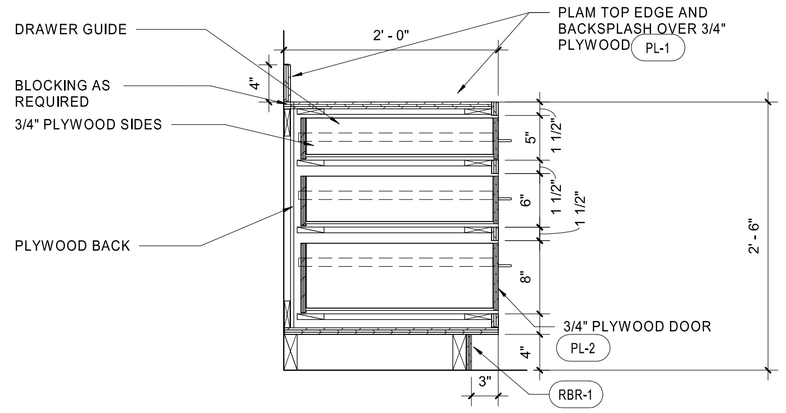
5.2D - PLAN SET



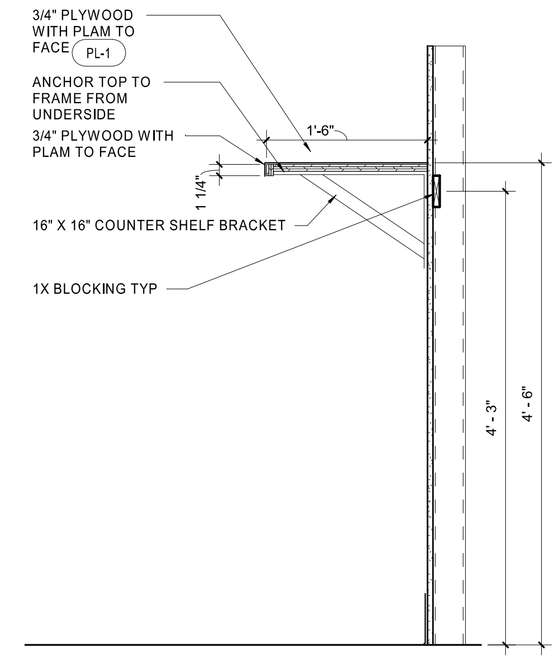
11 DESK SECTION
1" = 1'-0"



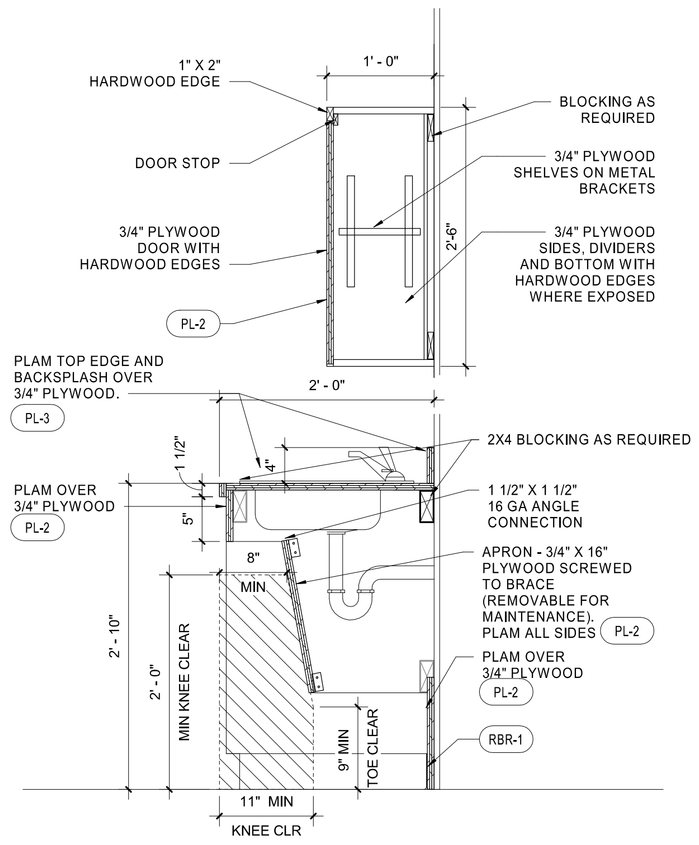
10 MILLWORK DETAIL - CABINET
1" = 1'-0"



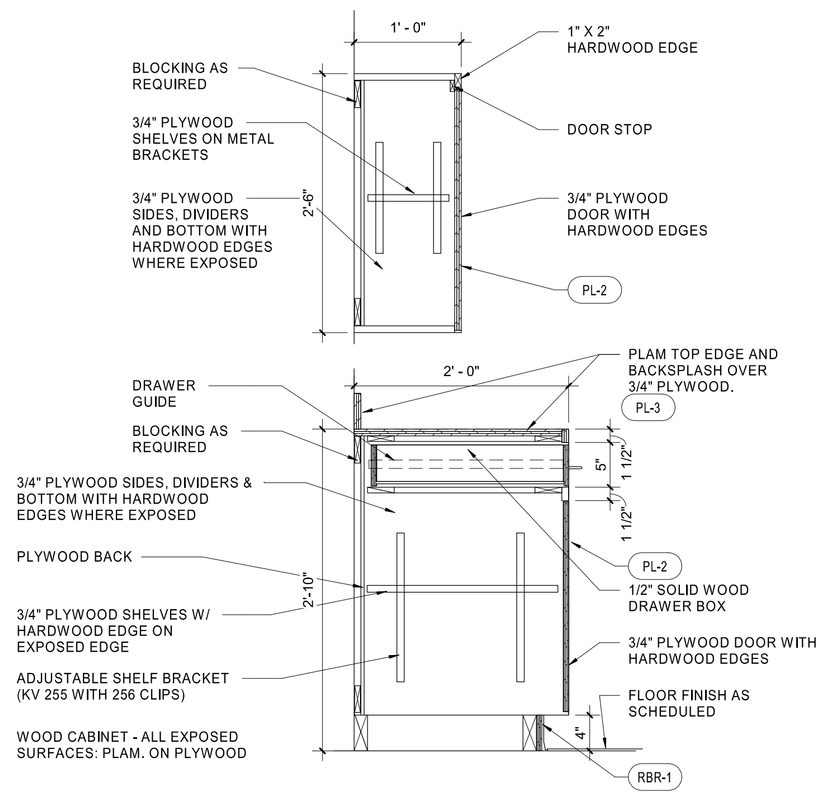
9 MILLWORK DETAIL - CABINET
1" = 1'-0"



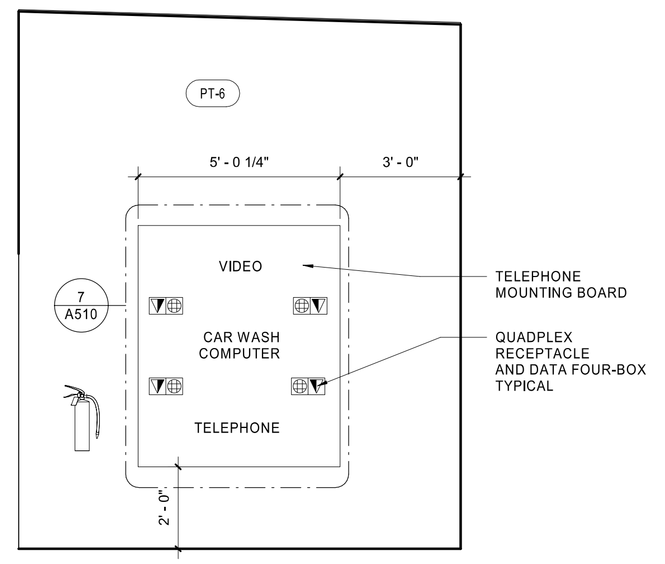
8 WALKIE WALL SHELF
1" = 1'-0"



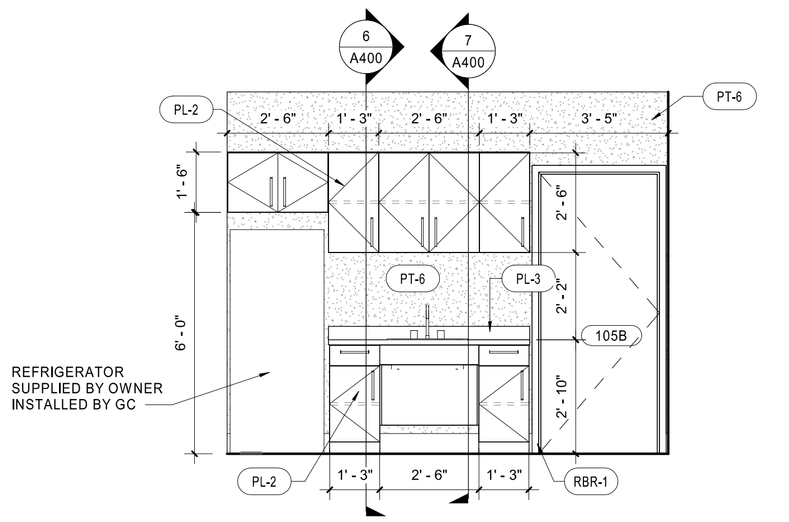
7 BREAKROOM SINK SECTION
1" = 1'-0"



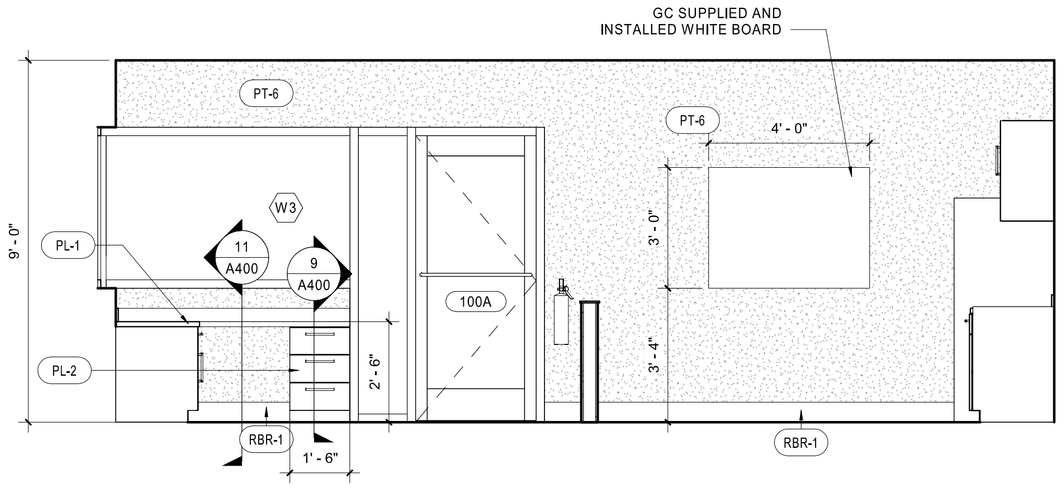
6 BREAKROOM CABINET SECTION
1" = 1'-0"



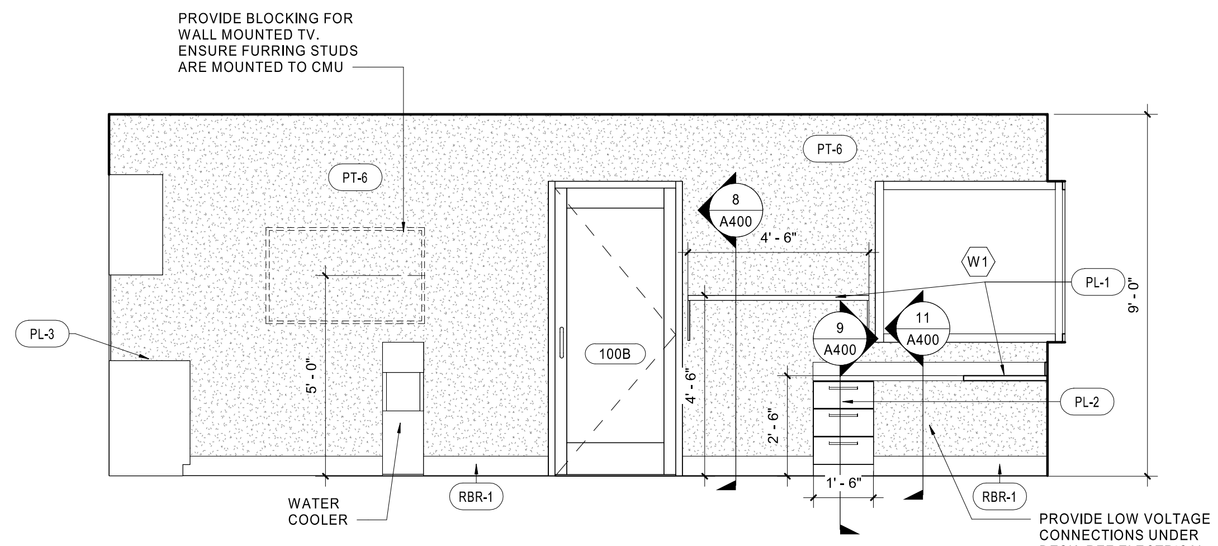
5 INTERIOR ELEVATION - STORAGE
3/8" = 1'-0"



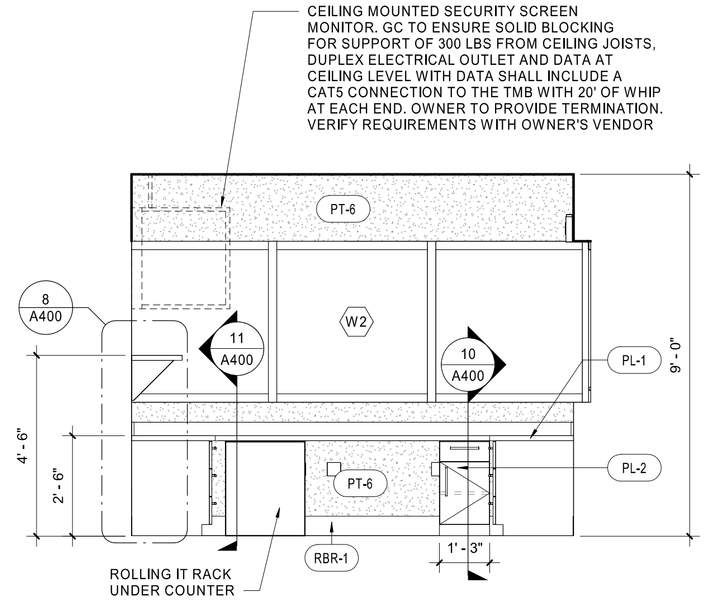
4 INTERIOR ELEVATION - BREAKROOM
3/8" = 1'-0"



3 INTERIOR ELEVATION - OFFICE
3/8" = 1'-0"



2 INTERIOR ELEVATION - OFFICE
3/8" = 1'-0"



1 INTERIOR ELEVATION - OFFICE
3/8" = 1'-0"

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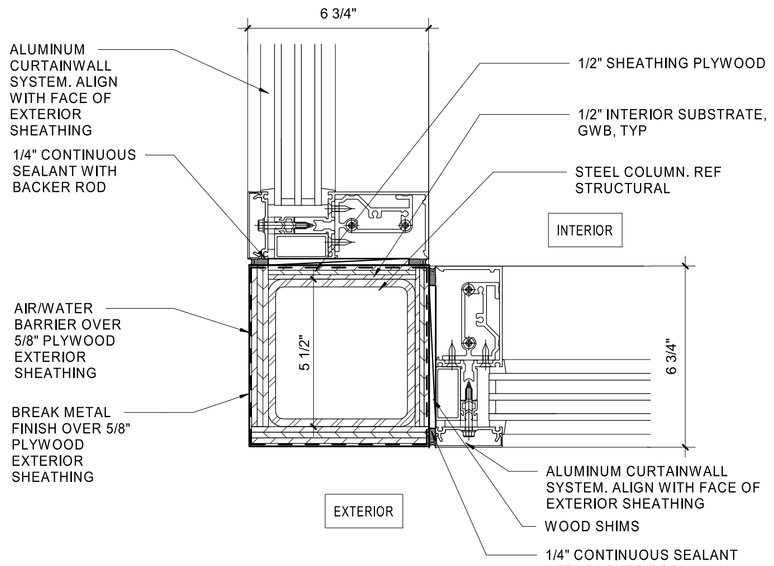
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MILLWORK AND INTERIOR ELEVATIONS

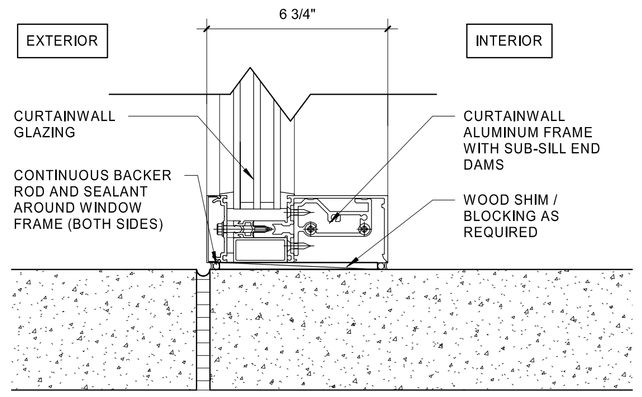
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A400-MILLWORK AND INTERIOR ELEVATIONS

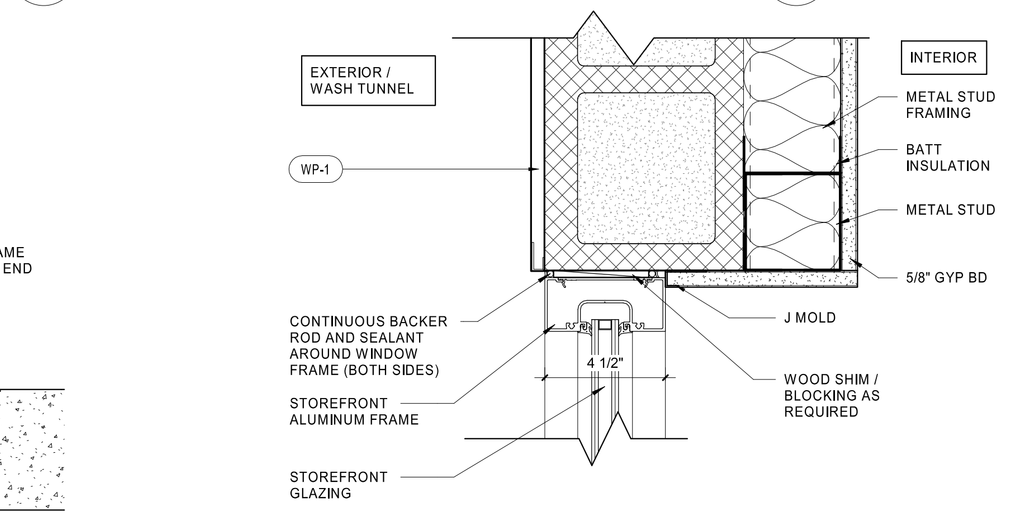
5.2D - PLAN SET



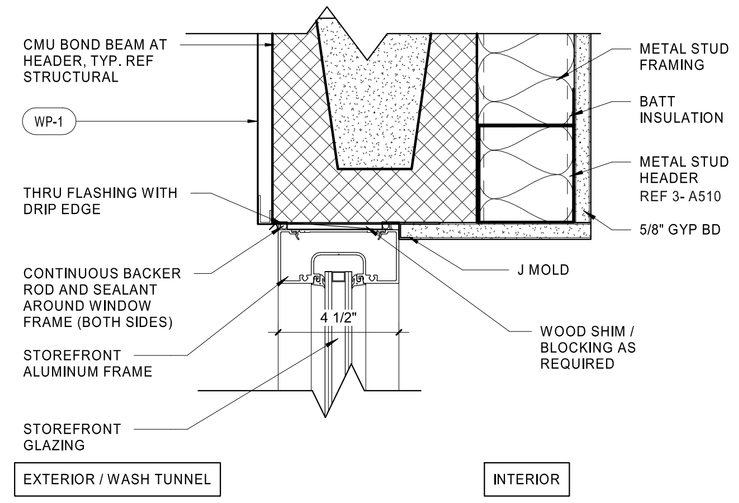
16 CURTAINWALL JAMB AT OUTSIDE CORNER
3" = 1'-0"



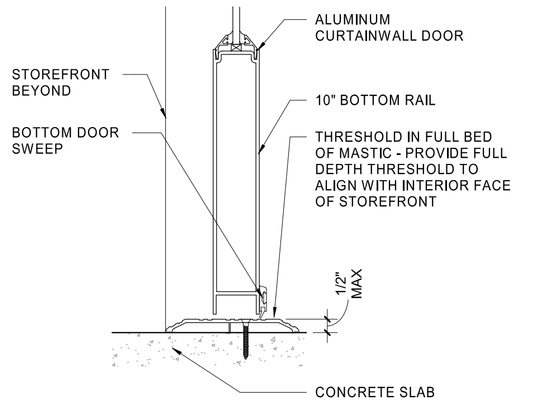
12 CURTAINWALL GLAZING SILL AT SLAB
3" = 1'-0"



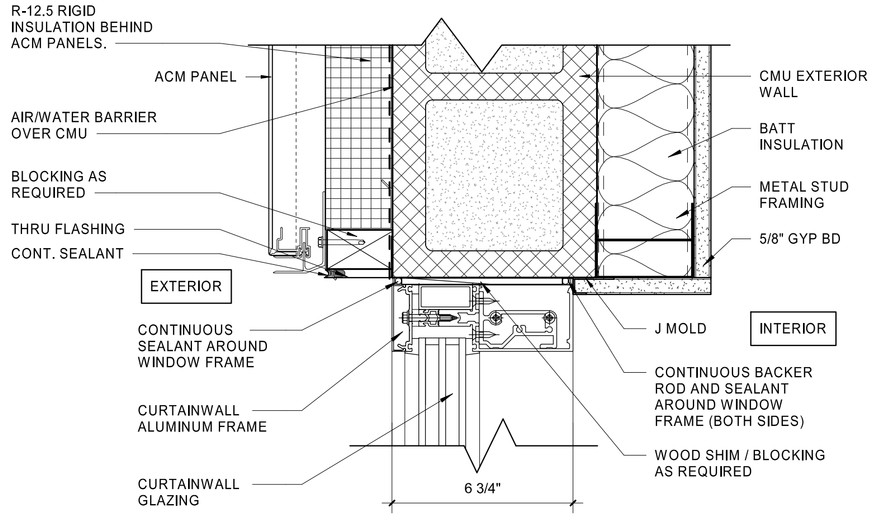
11 INTERIOR STOREFRONT JAMB AT CMU
3" = 1'-0"



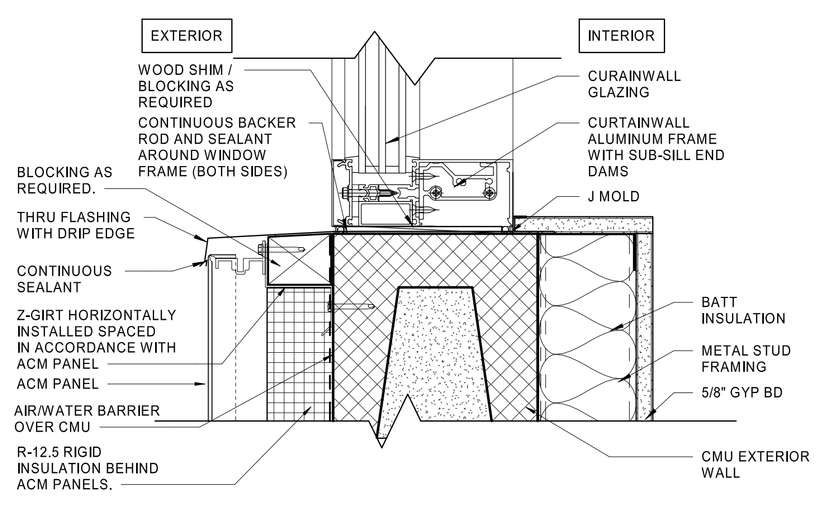
10 INTERIOR STOREFRONT HEADER AT CMU
3" = 1'-0"



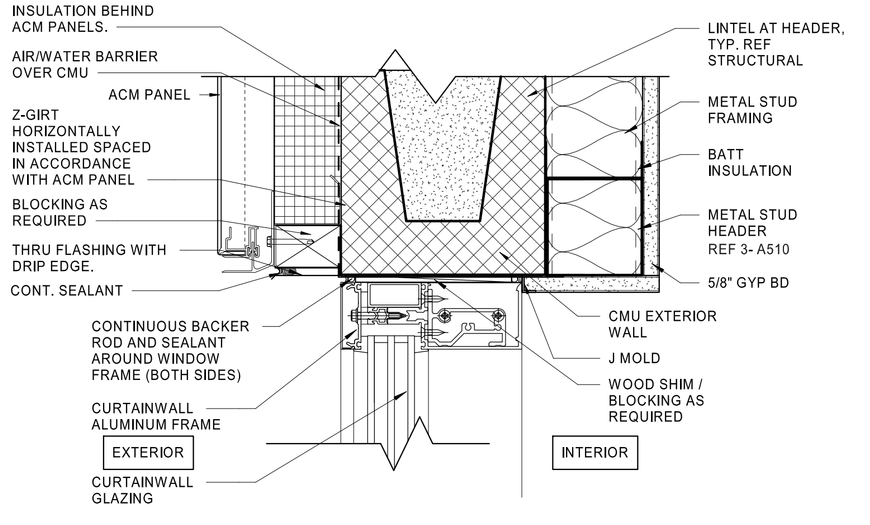
9 THRESHOLD
3" = 1'-0"



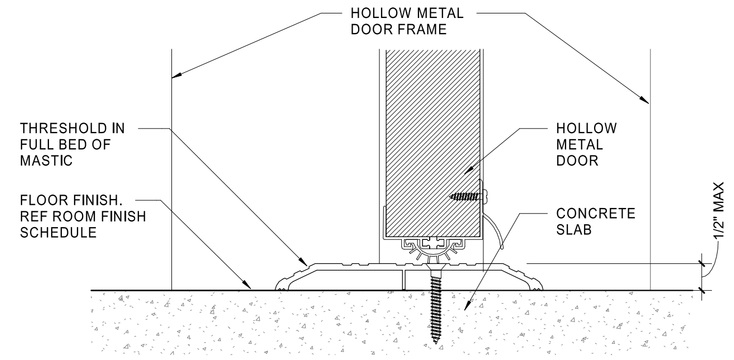
8 CURTAINWALL GLAZING JAMB AT ACM
3" = 1'-0"



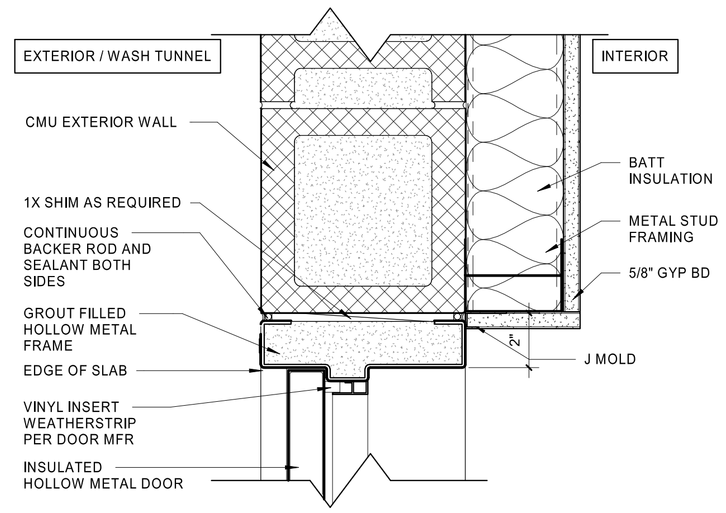
7 CURTAINWALL GLAZING SILL AT ACM
3" = 1'-0"



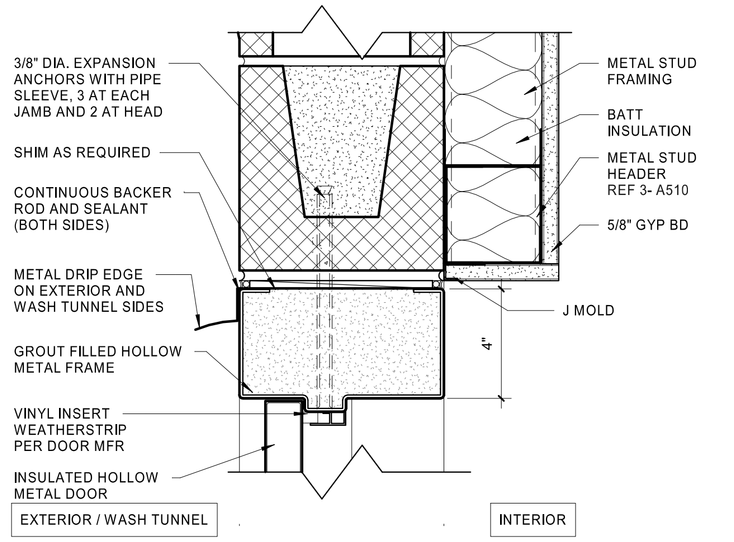
6 CURTAINWALL GLAZING HEADER AT ACM
3" = 1'-0"



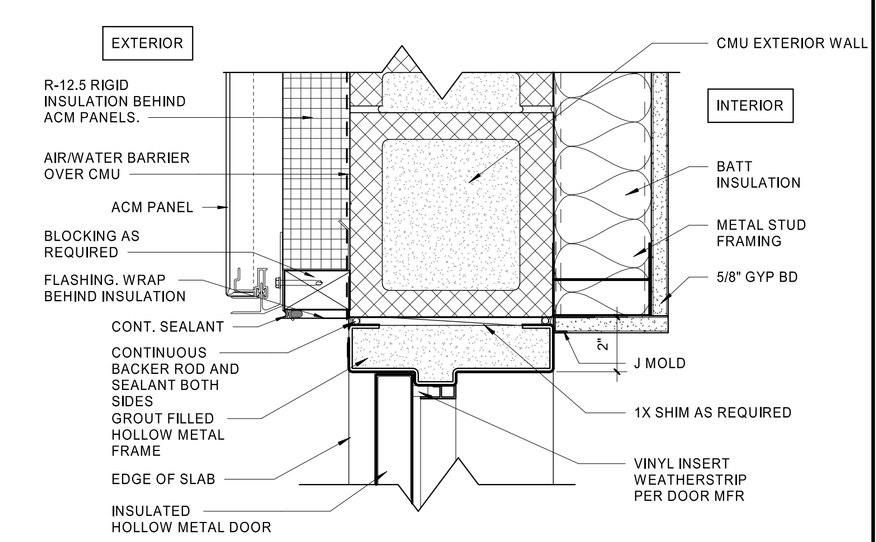
5 THRESHOLD (HOLLOW METAL DOOR)
6" = 1'-0"



4 JAMB DETAIL AT CMU
3" = 1'-0"



3 HEAD DETAIL AT CMU
3" = 1'-0"



1 JAMB DETAIL AT CMU
3" = 1'-0"

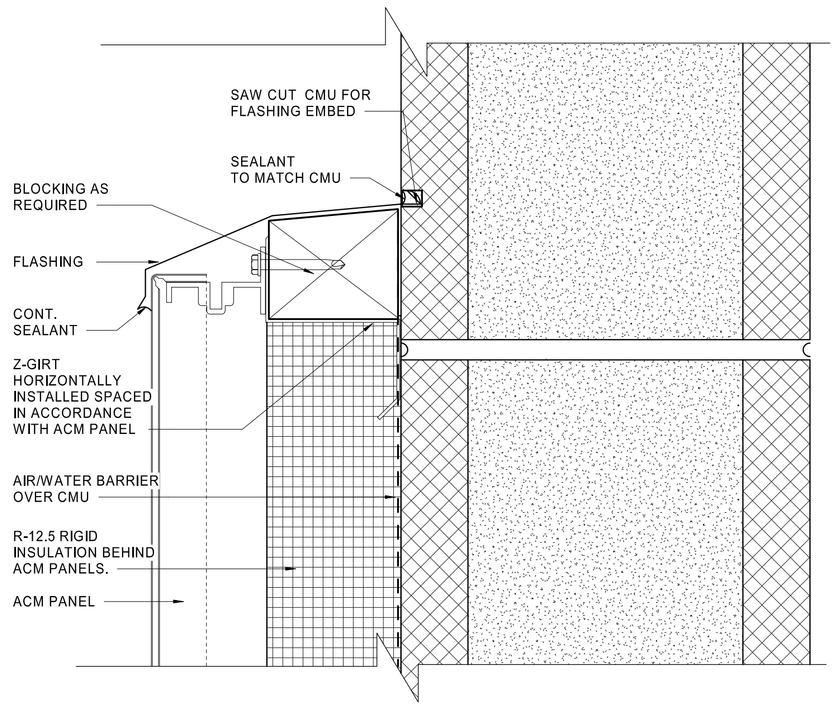
GENERAL NOTES

1. SEALANT AT STOREFRONT FRAME SHALL BE CLEAR
2. SEALANT AT ALL EIFS SHALL MATCH ADJACENT EIFS COLOR
3. GC SHALL REFER TO DRYVIT EIFS DETAILS AND SPECS FOR ADDITIONAL INSTALLATION INFORMATION.
4. PROVIDE DRAINAGE SYSTEM FOR ALL EIFS FINISH PER MANUFACTURER'S SPECIFICATIONS. AVERAGE MIN DRAINAGE PER ASTM.
5. SEALANT AT ALL ACM PANELS TO MATCH ADJACENT PANEL COLOR.

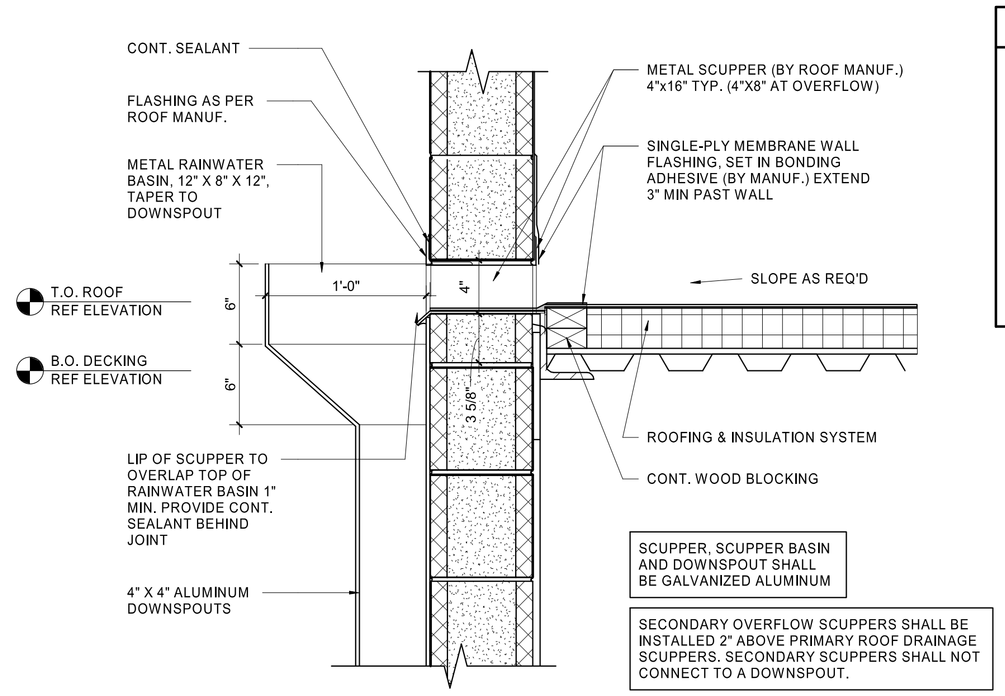
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5.2D - PLAN SET



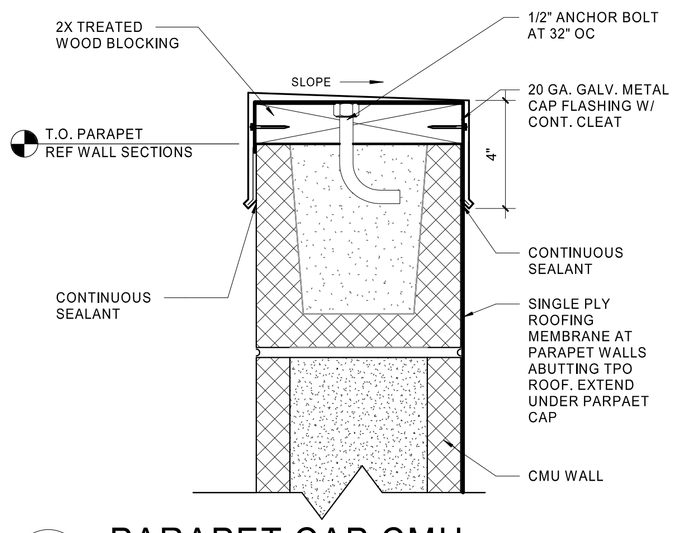
11 ACM TERMINATION DETAIL
6" = 1'-0"



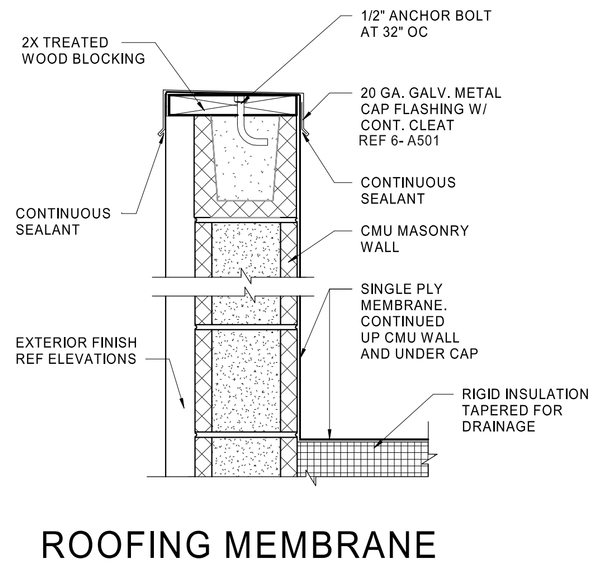
10 ROOF SCUPPER DETAIL
1 1/2" = 1'-0"

GENERAL NOTES

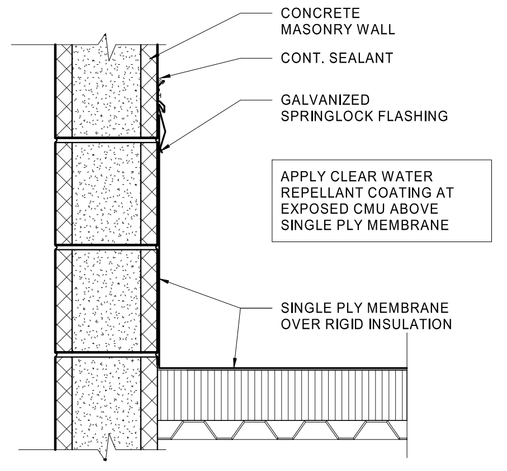
1. SEALANT AT STOREFRONT FRAME SHALL BE CLEAR
2. SEALANT AT ALL EIFS SHALL MATCH ADJACENT EIFS COLOR
3. GC SHALL REFER TO DRYVIT EIFS DETAILS AND SPECS FOR ADDITIONAL INSTALLATION INFORMATION.
4. PROVIDE DRAINAGE SYSTEM FOR ALL EIFS FINISH PER MANUFACTURER'S SPECIFICATIONS. AVERAGE MIN DRAINAGE PER ASTM.
5. SEALANT AT ALL ACM PANELS TO MATCH ADJACENT PANEL COLOR.



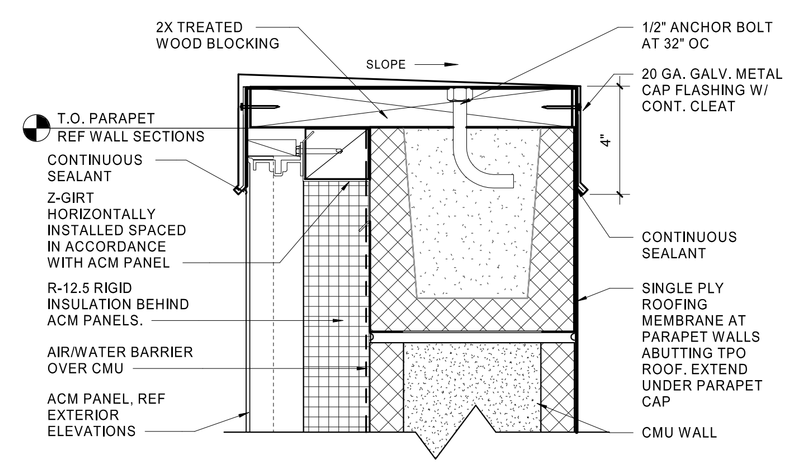
9 PARAPET CAP CMU
3" = 1'-0"



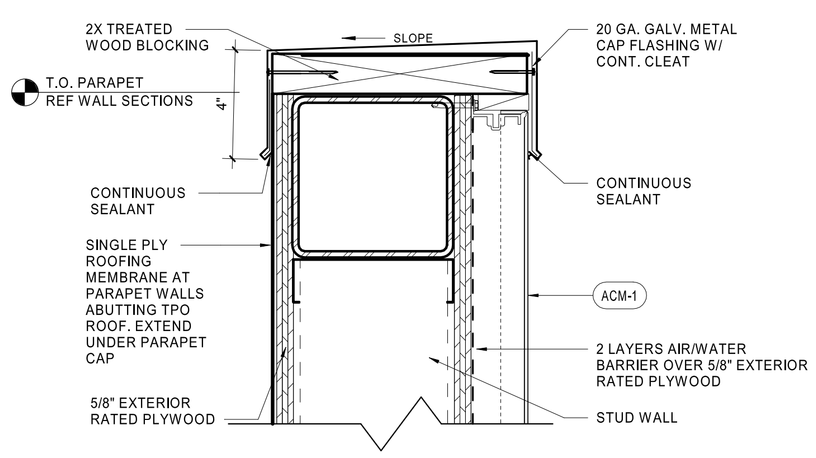
8 ROOFING MEMBRANE AT PARAPET WALL
1 1/2" = 1'-0"



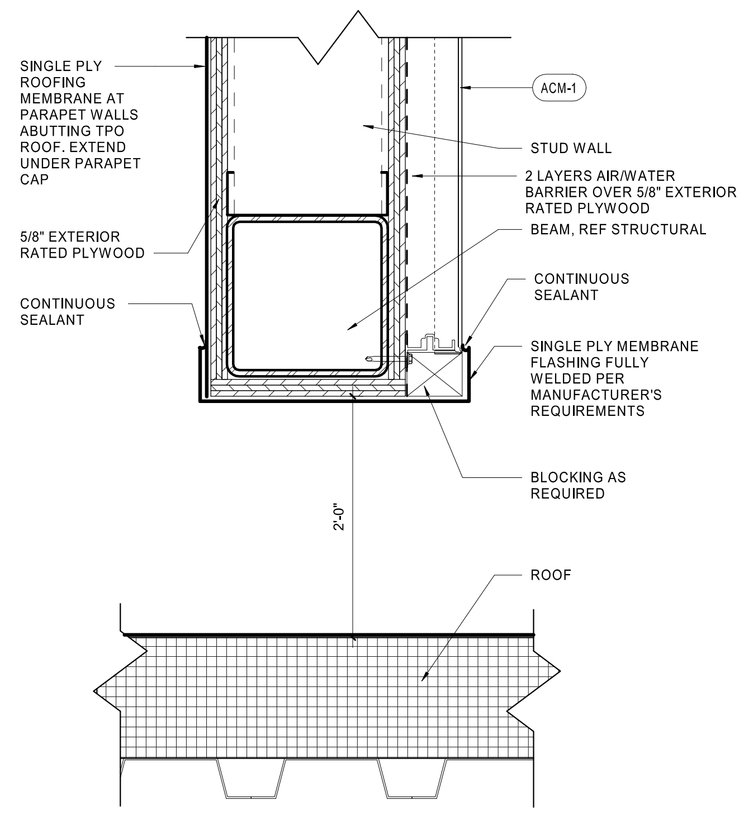
7 PARAPET FLASHING DETAIL
1 1/2" = 1'-0"



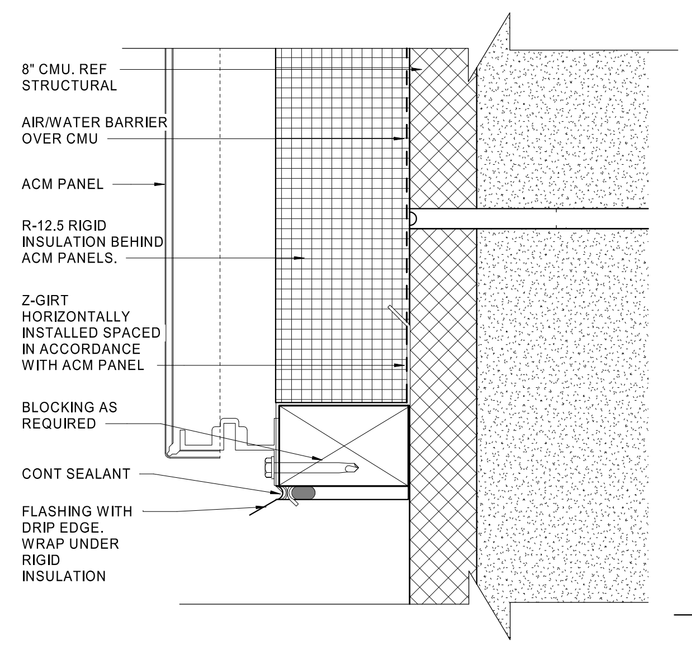
6 PARAPET CAP
3" = 1'-0"



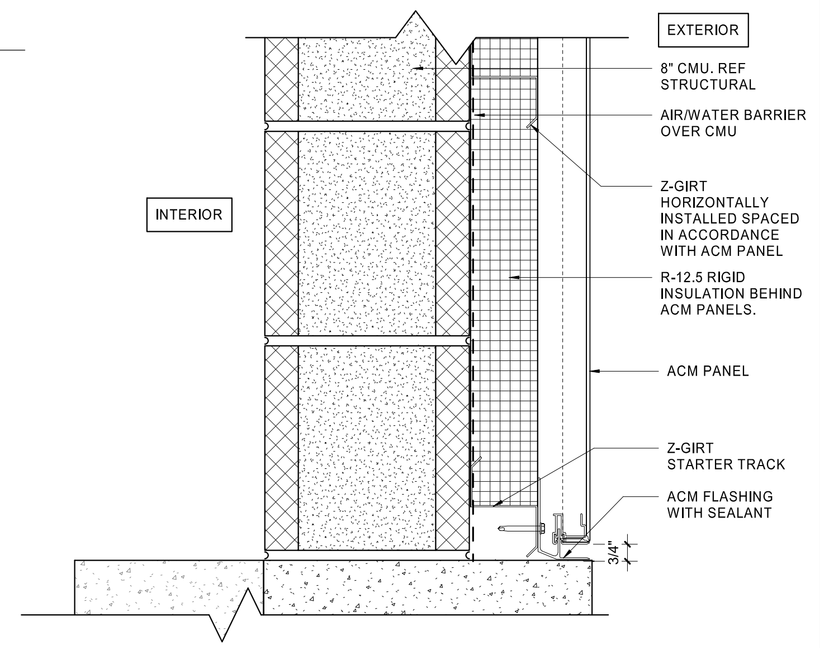
4 PARAPET CAP AT STUD WALL
3" = 1'-0"



3 B.O. PARAPET AT TOWER
3" = 1'-0"



2 ACM AT BASE
6" = 1'-0"



1 ACM AT BASE
3" = 1'-0"

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DATE ON 7/10/24 - AND IT IS NOT INTENDED FOR USE ON ANY OTHER PROJECT SITE OR AT A LATER TIME.
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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	JMC
DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

ARCHITECTS
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota
Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.07.10 14:49:46-06'00'
License #: 55742

EXTERIOR DETAILS

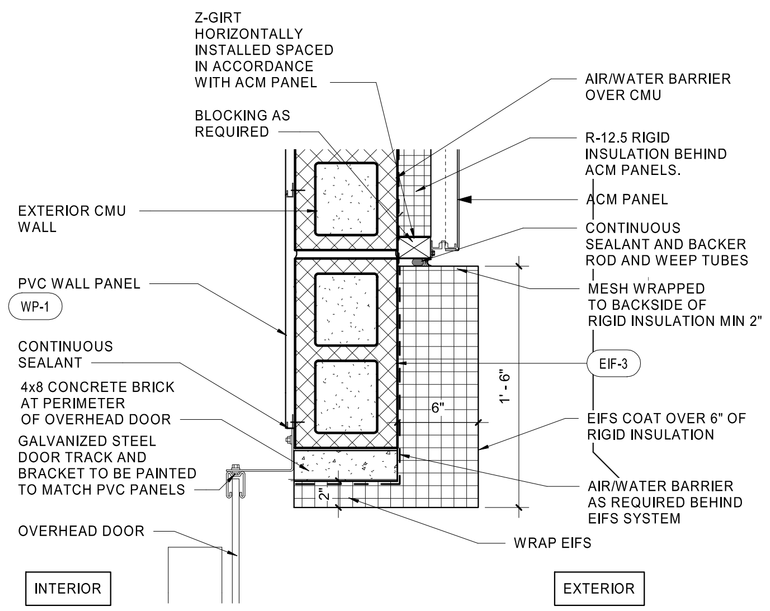
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C:\Users\meghan.davis\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_ARCH_V22_HFA_Meghan.Davis.rvt
A501-EXTERIOR DETAILS

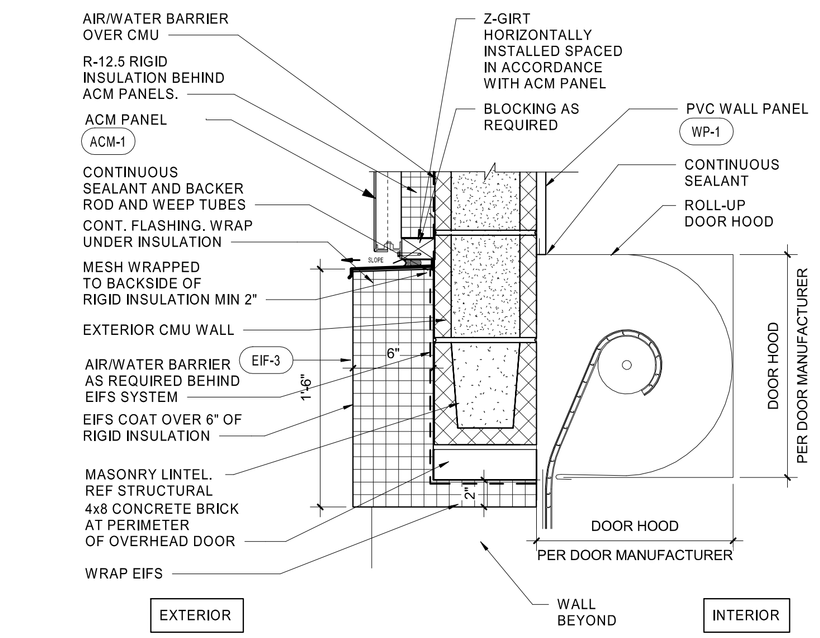
5.2D - PLAN SET

GENERAL NOTES

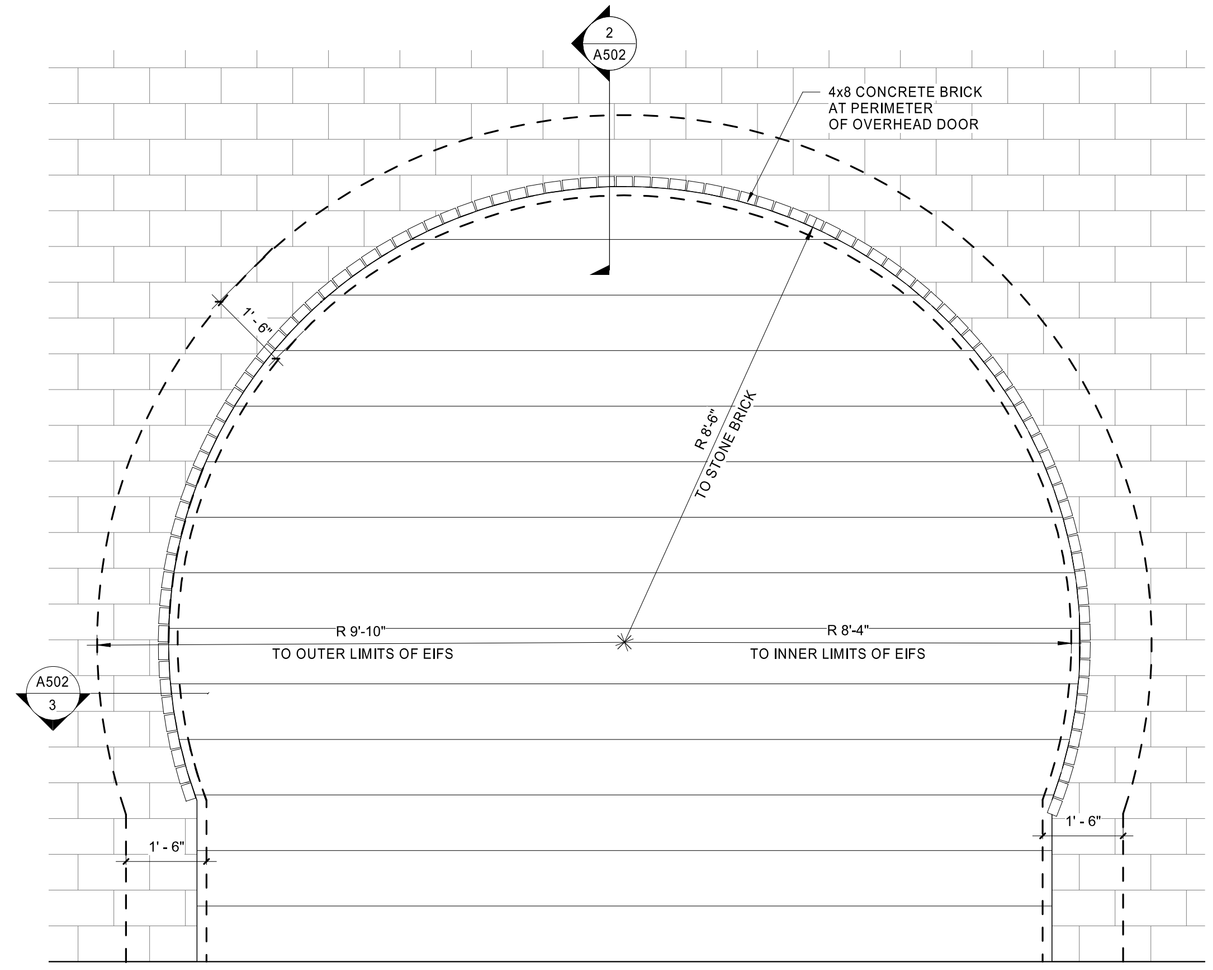
1. SEALANT AT STOREFRONT FRAME SHALL BE CLEAR
2. SEALANT AT ALL EIFS SHALL MATCH ADJACENT EIFS COLOR
3. GC SHALL REFER TO DRYVIT EIFS DETAILS AND SPECS FOR ADDITIONAL INSTALLATION INFORMATION.
4. PROVIDE DRAINAGE SYSTEM FOR ALL EIFS FINISH PER MANUFACTURER'S SPECIFICATIONS. AVERAGE MIN DRAINAGE PER ASTM.
5. SEALANT AT ALL ACM PANELS TO MATCH ADJACENT PANEL COLOR.



3 OVERHEAD COILING DOOR JAMB
1 1/2" = 1'-0"



2 ROLL-UP DOORHEAD
1 1/2" = 1'-0"



1 TUNNEL CIRCLE OPENING
1/2" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	JMC
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DOCUMENT DATE:	01/10/24

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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly registered Architect under the laws of the State of Minnesota

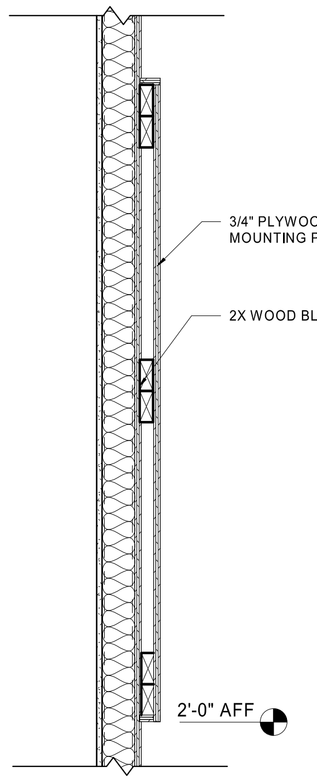
Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:49:54-06'00'
License #: 55742

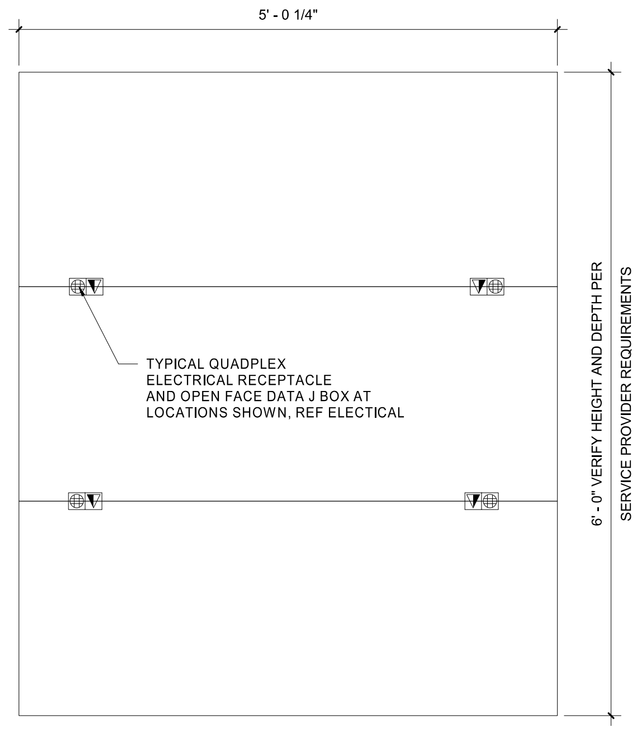
EXTERIOR DETAILS

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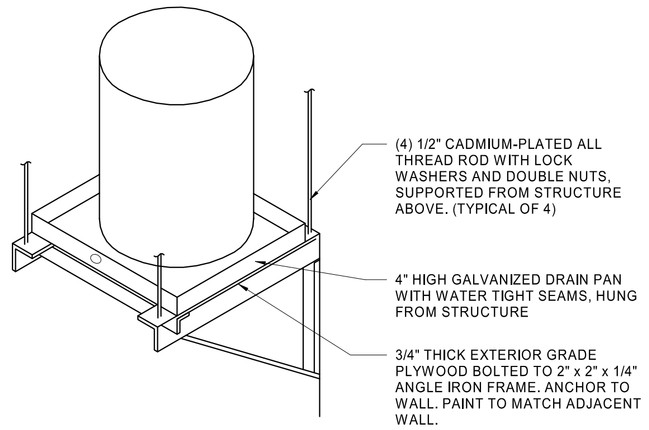
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A502 EXTERIOR DETAILS

5.2D - PLAN SET

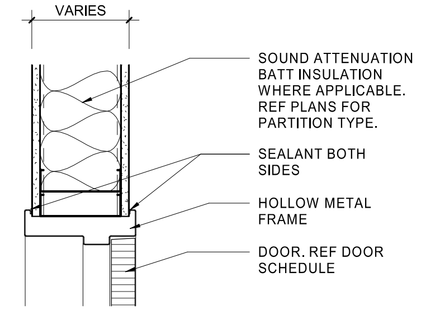




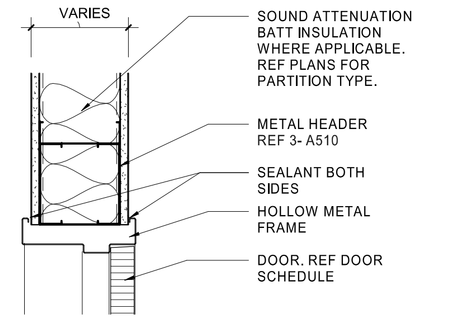
7 TELEPHONE BOARD
1" = 1'-0"



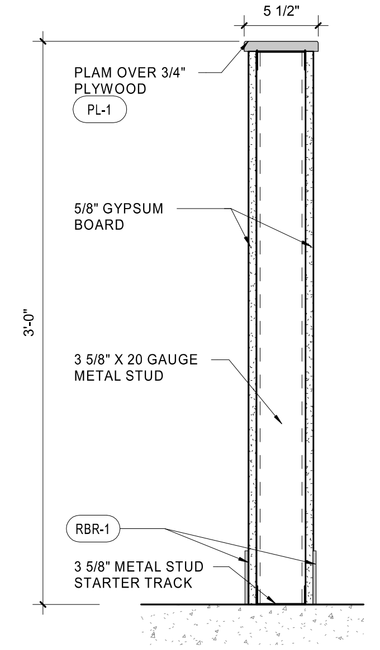
12 WALL MOUNTED ELECTRIC WATER HEATER DETAIL
12" = 1'-0"



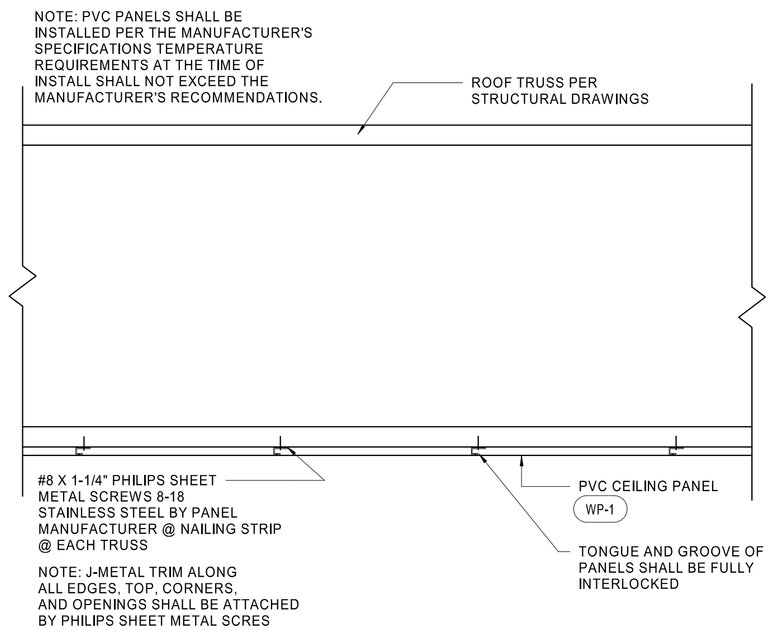
11 DOOR JAMB
1 1/2" = 1'-0"



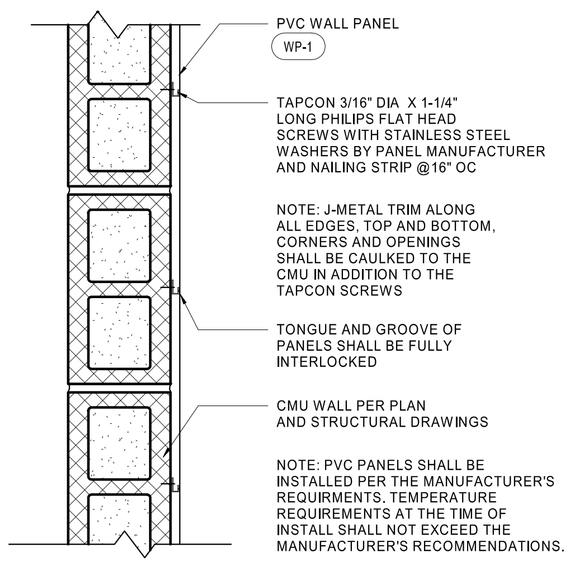
10 DOOR HEAD
1 1/2" = 1'-0"



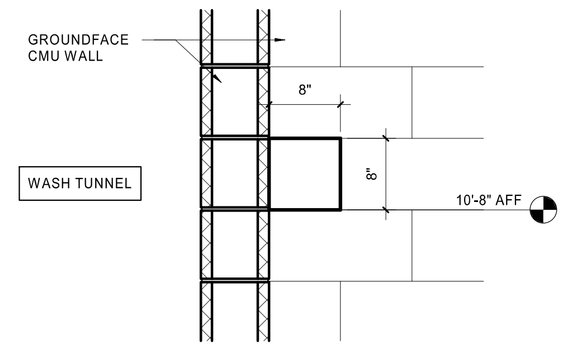
9 HALF WALL DETAIL
1 1/2" = 1'-0"



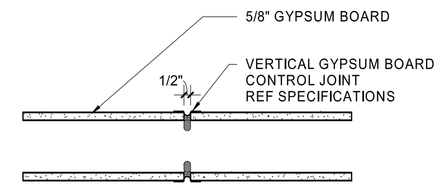
5 PVC PANELS TO ROOF STRUCTURE



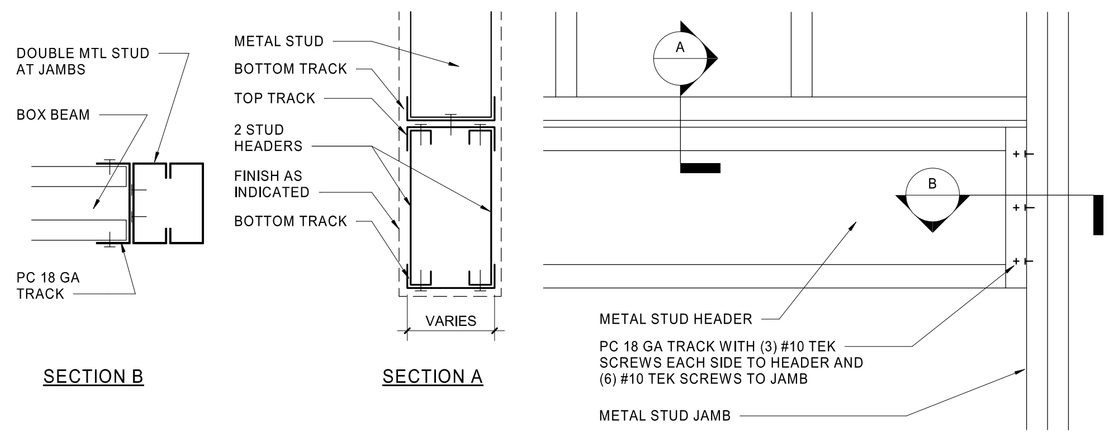
4 PVC PANELS TO CMU WALLS
1 1/2" = 1'-0"



6 CONDUIT SLEEVE
1" = 1'-0"



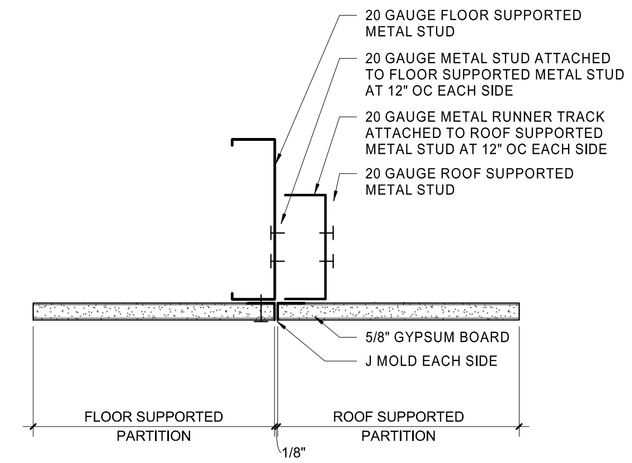
2 GYP BOARD CONTROL JOINT
1 1/2" = 1'-0"



INTERIOR NON-LOAD BEARING PARTITION HEADER SCHEDULE

HEADER LENGTH	HEADER MEMBERS	MINIMUM EFFECTIVE PROPERTIES PER STUD
2' TO 6'	(2) 6" x 18 GAUGE	Ix = 2.042 Sx = 0.670
6' TO 8'	(2) 6" x 16 GAUGE	Ix = 2.518 Sx = 0.839
8' TO 10'	(2) 6" x 14 GAUGE	Ix = 3.094 Sx = 1.031

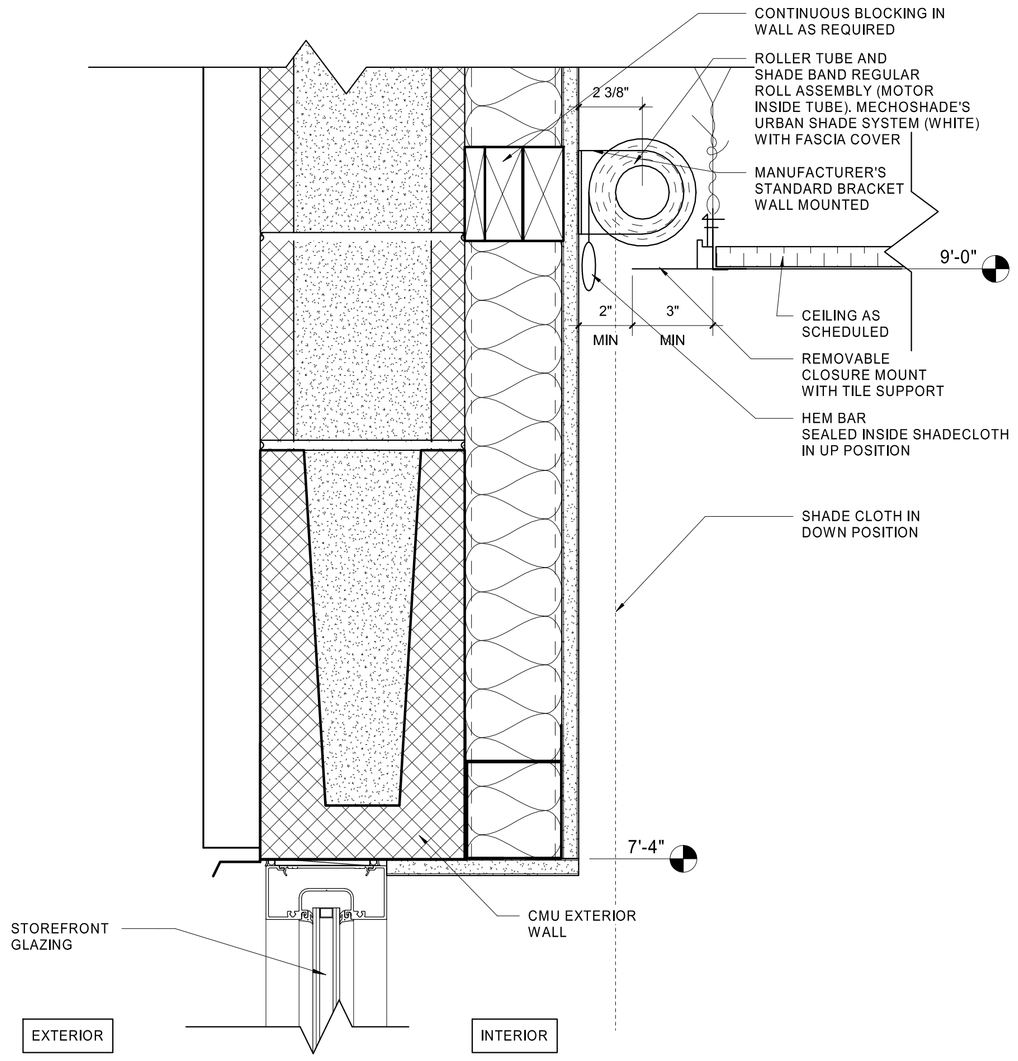
3 HEADER CONNECTION DETAIL
1 1/2" = 1'-0"



NOTES:

1. PROVIDE VERTICAL SLIP JOINT AT ALL LOCATIONS NOT SPECIFICALLY REFERENCED
2. SLIP TRACK MUST ALLOW 2" MIN DOWNWARD DEFLECTION
3. WHEN FLOOR SUPPORTED PARTITION IS PERPENDICULAR TO JOIST, INSTALL CAPTURE TRACK AT BOTTOM OF JOIST (INCLUDE PORTIONS PARALLEL TO JOIST)
4. WHEN FLOOR SUPPORTED PARTITION IS PARALLEL TO JOIST, CAPTURE TRACK MUST BE INSTALLED AT ROOF DECK

1 VERTICAL SLIP JOINT
3" = 1'-0"



8 ROLL DOWN BLINDS AT WINDOW
3" = 1'-0"

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota
Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.01.10 14:35:03-06'00'
License #: 55742

INTERIOR DETAILS

SHEET: A510

1/10/2024 1:59:41 PM
C:\Users\meghan.davis\Documents\2023 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_ARCH_V22_ HFA Meghan Davis.rvt
ARCH INTERIOR DETAILS

5.2D - PLAN SET

DOOR SCHEDULE

MARK	DOOR TYPE	DOOR MATERIAL	DOOR FINISH PUSH SIDE	DOOR FINISH PULL SIDE	WIDTH	HEIGHT	THICKNESS	FRAME TYPE	FRAME MATERIAL	FRAME FINISH PUSH SIDE	FRAME FINISH PULL SIDE	HEAD DETAIL	JAMB DETAIL	THRESHOLD DETAIL	HARDWARE SET	COMMENTS
100A	E	ANODIZED ALUMINUM	CLEAR ANODIZED	CLEAR ANODIZED	3'-0"	7'-1 1/2"	1 3/4"	---	ANODIZED ALUMINUM	CLEAR ANODIZED	CLEAR ANODIZED	6/A500	8/A500	9/A500	1	
100B	E	ANODIZED ALUMINUM	CLEAR ANODIZED	CLEAR ANODIZED	3'-0"	7'-2"	1 3/4"	---	ANODIZED ALUMINUM	CLEAR ANODIZED	CLEAR ANODIZED	10/A500	11/A500	9/A500	7	
103A	C	HOLLOW METAL	PT-1	PT-4/PT-3	3'-0"	7'-0"	1 3/4"	1	HOLLOW METAL	PT-1	PT-4/PT-3	3/A500	1/A500	5/A500	5	
105A	D	HOLLOW METAL	PT-1	PT-4/PT-3	6'-0"	7'-0"	1 3/4"	1	HOLLOW METAL	PT-1	PT-4/PT-3	3/A500	1/A500	5/A500	2	
105B	C	HOLLOW METAL	PT-1	PT-1	3'-0"	7'-0"	1 3/4"	2	HOLLOW METAL	PT-1	PT-1	3/A500	4/A500	5/A500	8	
107A	D	HOLLOW METAL	PT-1	PT-4/PT-3	6'-0"	8'-0"	1 3/4"	1	HOLLOW METAL	PT-1	PT-4/PT-3	3/A500	1/A500	5/A500	2	
107B	C	HOLLOW METAL	PT-1	PT-1	3'-0"	7'-0"	1 3/4"	1	HOLLOW METAL	PT-1	PT-1	3/A500	4/A500	5/A500	3	
109A	B	STEEL	WHITE	WHITE	17'-0"	14'-6"	---	---	---	---	---	2/A502	3/A502	---	---	MANUAL OPERATION W/ LOCKING & KEYING PER MANUFACTURERS STANDARDS. SECURITY GRILLE WITH SOLID SLATS
109B	B	STEEL	WHITE	WHITE	17'-0"	14'-6"	---	---	---	---	---	2/A502	3/A502	---	---	MANUAL OPERATION W/ LOCKING & KEYING PER MANUFACTURERS STANDARDS. SECURITY GRILLE WITH SOLID SLATS
210A	F	HOLLOW METAL	PT-1	PT-1	6'-0"	7'-0"	1 3/4"	1	HOLLOW METAL	PT-1	PT-1	6/A500	2/A500	---	9	
211A	F	HOLLOW METAL	PT-1	PT-1	6'-0"	7'-0"	1 3/4"	1	HOLLOW METAL	PT-1	PT-1	6/A500	2/A500	---	9	

ROOM LEGEND

ROOM #	NAME
100	OFFICE
103	UNISEX RESTROOM
104	BREAK ROOM
105	STORAGE
107	MECHANCIAL ROOM
108	ELECTRICAL
109	WASH TUNNEL
210	VAC ENCLOSURE
211	VAC ENCLOSURE

GLAZING NOTES

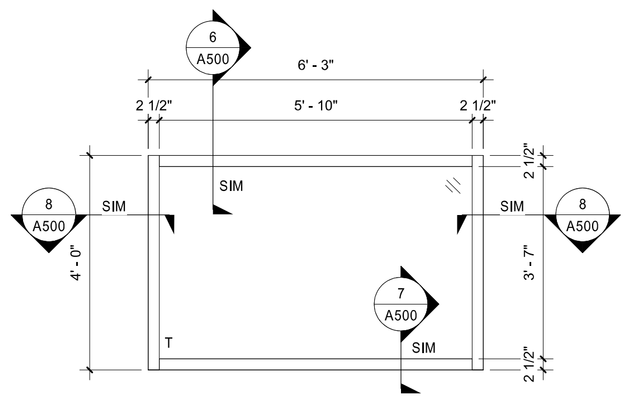
1. GLAZING SUBJECT TO HUMAN IMPACT LOADS IN ALL HAZARDOUS LOCATIONS SHALL COMPLY WITH MNBC SECTION 2406. STOREFRONT GLASS DOORS AND ADJACENT GLASS PANELS SHALL BE SAFETY/IMPACT RESISTANT GLASS.
2. ALL GLAZING TO BE 1-3/4" THICK TEMPERED, LOW-E SYSTEM TO BE DESIGNED FOR 90 MPH MINIMUM REGARDLESS IF LOCAL WIND SPEED IS LESS. DESIGN SHOULD TAKE INTO ACCOUNT SITE SPECIFIC WIND SPEEDS.
3. STOREFRONT FRAME SYSTEM ANODIZED ALUMINUM
4. GLAZING VENDOR TO FIELD VERIFY ALL MEASUREMENTS AND PROVIDE SHOP DRAWINGS FOR ARCHITECTS REVIEW PRIOR TO FABRICATION
5. GLAZING TO MEET ENERGY REQUIREMENTS FOR CLIMATE ZONE 6A OF 2024 MNCEC . U-VALUE FACTOR STOREFRONT - 0.16, SHGC FACTOR - 0.25, VT - 0.41

DOOR NOTES

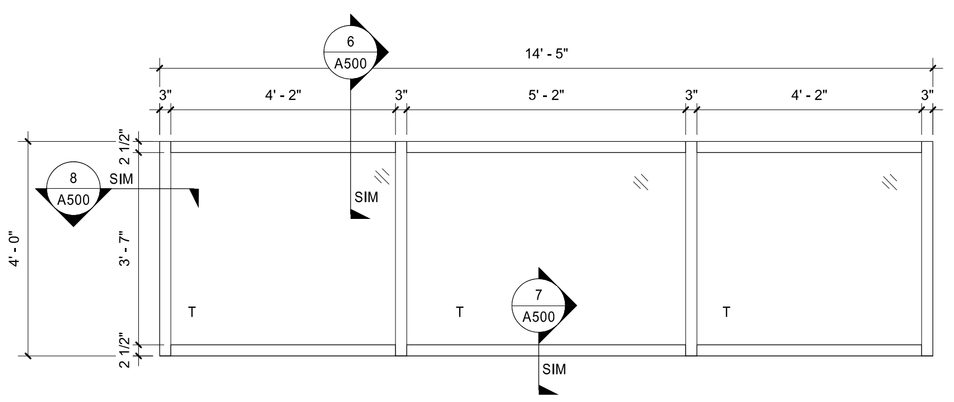
1. PROVIDE A READILY VISIBLE SIGN ON EGRESS SIDE OR ADJACENT TO THE DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED"
2. ALL DOOR AND HARDWARE SHALL COMPLY WITH 2020 MINNESOTA ACCESSIBILITY STANDARDS
3. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE
4. FOR ALL HOLLOW METAL DOORS, FABRICATE FRAMES AND DOORS WITH HARDWARE REINFORCEMENT PLATES WELDED IN PLACE. PROVIDE MORTISE GUARD BOXES
5. ALL STOREFRONT DOORS - PRY RESISTANT JAMB COVER: PROVIDE DOOR GUARD, CONSTRUCTED OF 1-5/16"X4"X1/4" FULL HEIGHT, ANODIZED ALUMINUM CHANNEL CUSTOM FITTED TO EACH STOREFRONT DOOR.
6. DOOR CLOSERS SHALL HAVE OPENING FORCE OF 5LBS MAX.
7. DOORS WITH CLOSERS SHALL HAVE A CLOSING SPEED OF 5 SECONDS MIN. TIME MEASURED FROM OPEN POSITION OF 90 DEGREES TO A POSITION 12 DEGREES FROM LATCH.
8. DOOR SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM

HARDWARE SCHEDULE

SET 1 - STOREFRONT SINGLE ENTRY (EXTERIOR)	
1 EA	CONTINUOUS HINGES
1 EA	SURFACE MOUNTED SINGLE ACTING CLOSER
1 SET	SINGLE ACTING PUSH-PULL BARS
1 EA	HOOKBOLT LOCK W/ THUMBTURN
1 SET	WEATHER STRIPPING
1 EA	ADA THRESHOLD
1 EA	DOOR SWEEP
SET 2 - EXTERIOR	
1-1/2 PAIR	FULL MORTISE HINGES
1 EA	HEAVY DUTY ENTRY LOCKSET W/ LEVER (NOT ON DOOR D-106)
1 EA	DOOR CLOSER (NORTON 8301)
1 EA	ADA THRESHOLD
1 EA	WEATHER STRIPPING
1 EA	DOOR SWEEP
1 EA	DRIP CAP
3 EA	DOOR SILENCER
1 EA	LOCK GUARD
1 EA	PANIC PAR WITH HEAVY DUTY ENTRY LOCKSET W/ LEVER ON CAR WASH SIDE
SET 3 - INTERIOR LOCKSET	
1-1/2 PAIR	FULL MORTISE HINGES
1 EA	WALL DOOR STOP
1 EA	PRIVACY LOCKSET
3 EA	DOOR SILENCER
1 EA	DOOR CLOSER
1 EA	WALL DOOR STOP
SET 4 - PASSAGE LOCKSET	
1-1/2 PAIR	FULL MORTISE HINGES
1 EA	DOOR CLOSER (NORTON 8301)
1 EA	PASSAGE LOCKSET
SET 5 - PRIVACY LOCKSET	
1-1/2 PAIR	FULL MORTISE HINGES
1 EA	WALL DOOR STOP
1 EA	PRIVACY LOCKSET
3 EA	DOOR SILENCER
1 EA	DOOR CLOSER WITH HOLD OPEN
1 EA	ADA THRESHOLD
1 EA	WEATHER STRIPPING
1 EA	DOOR SWEEP
1 EA	DRIP CAP
SET 6 - STOREROOM LOCKSET	
1-1/2 PAIR	FULL MORTISE HINGES
1 EA	STOREROOM LOCKSET
3 EA	DOOR SILENCER
1 EA	DOOR CLOSER
SET 7 - STOREFRONT SINGLE ENTRY (INTERIOR)	
1-1/2 PAIR	BUTT HINGES
1 SET	SINGLE ACTING PULL BARS
1 EA	HOOKBOLT LOCK W/ THUMBTURN
1 EA	KICK DOWN DOOR HOLDER
1 EA	SURFACE MOUNTED SINGLE ACTING CLOSER
1 EA	WALL DOOR STOP
SET 8 - INTERIOR LOCKSET	
1-1/2 PAIR	FULL MORTISE HINGES
1 EA	WALL DOOR STOP
1 EA	PRIVACY LOCKSET
3 EA	DOOR SILENCER
1 EA	WALL DOOR STOP
SET 9 - STOREROOM LOCKSET	
1-1/2 PAIR	FULL MORTISE HINGES
1 EA	STOREROOM LOCKSET
1 EA	WEATHER STRIPPING
1 EA	LOUVER

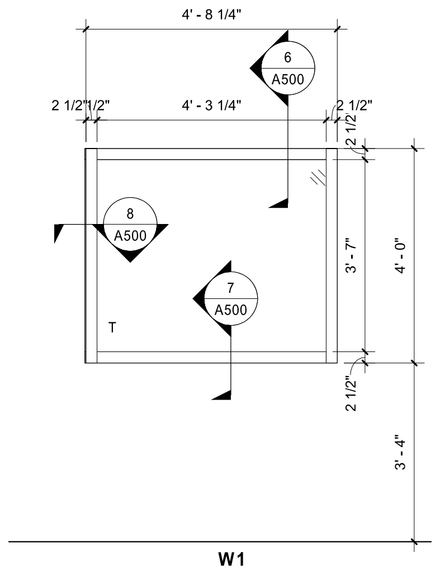


W4

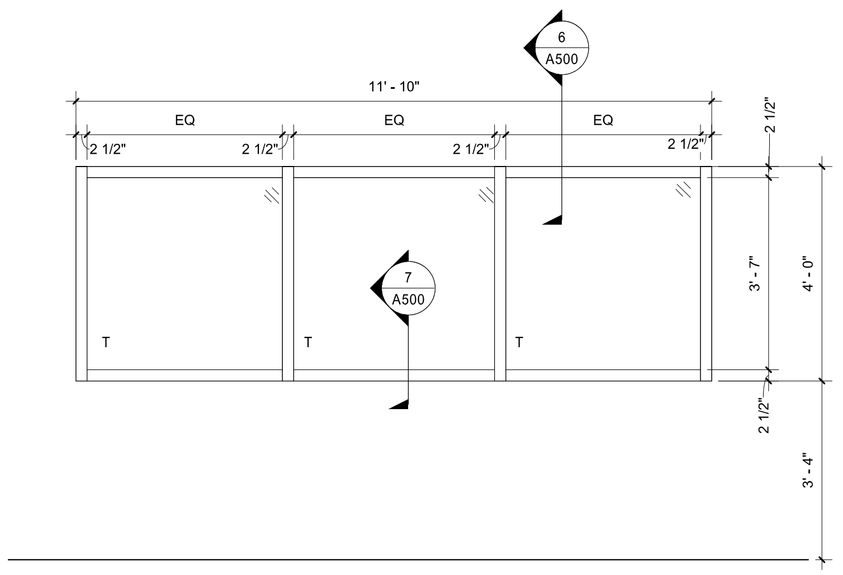


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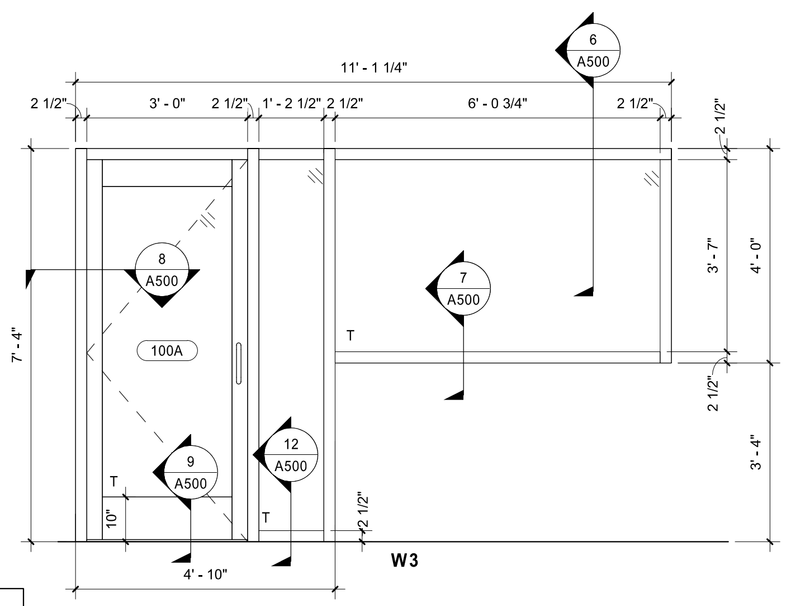
STOREFRONT:
- EXTERIOR FRAME KAWNEER NORTH AMERICA 1600UT SYSTEM 1 CURTAIN WALL OR APPROVED EQUAL; (2 1/2" X 6 3/4"; THERMALLY BROKEN)
- FRAME FINISH: CLEAR ANODIZED ALUMINUM
- GLAZING: VIRACON 1-3/4" VRE 1-54 TRIPLE INSULATING WITH SECOND LOW-E COATING. U-VALUE:0.16 SHGC:0.25 VT: .41
- FRAME SYSTEM AND FINISH WARRANTY: MIN 5 YEAR FROM DATE OF SUBSTANTIAL COMPLETION
- GLAZING WARRANTY: MIN 10 YEAR FROM DATE OF SUBSTANTIAL COMPLETION
- INTERIOR INTERIOR STOREFRONT DOOR, KAWNEER NORTH AMERICA TRIFAB 451T OR APPROVED EQUAL; (2" X 4 1/2" THERMALLY BROKEN)



W1



W2



W3

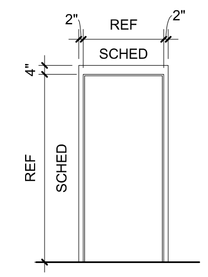
DIMENSIONS SHOWN DO NOT ACCOUNT FOR SHIM SPACE THAT MAY BE REQUIRED FOR THE INSTALLATION OF STOREFRONT

STOREFRONT FRAME COLOR: ANODIZED ALUMINUM.

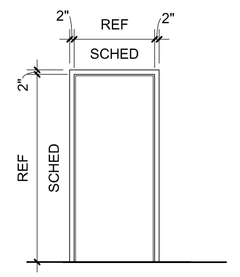
ALUMINUM CURTAINWALL
T = TEMPERED GLASS

3 STOREFRONT ELEVATIONS

1/2" = 1'-0"



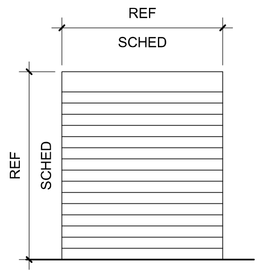
1
HOLLOW METAL
AT CMU WALL



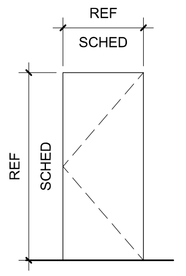
2
HOLLOW METAL
AT STUD WALL

2 FRAME TYPES

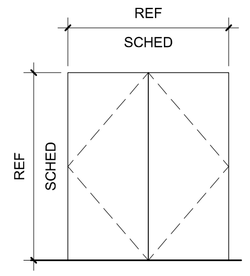
1/4" = 1'-0"



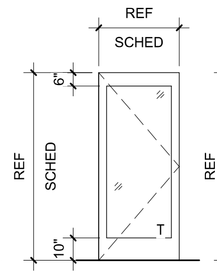
B
ROLL UP DOOR
OVERHEAD DOOR CO.
ROLLING STEEL DOOR
MODEL 625 OR APPROVED
EQUAL;



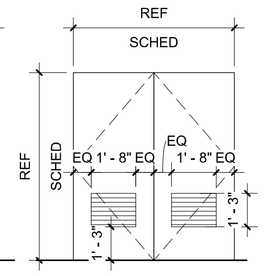
C
HOLLOW METAL
INSULATED



D
HOLLOW METAL
INSULATED



E
EXTERIOR
STOREFRONT ENTRY DOOR



F
HOLLOW METAL
INSULATED

1 DOOR TYPES

1/4" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/24

CHECKED BY:	JMC
DRAWN BY:	MND
DOCUMENT DATE:	01/10/24

ARCHITECTS
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota

Print Name: JAMES EDWARD MANN
Signature:
Date: 2024.07.10 14:30:11 -05'00'
License #: 55742

STOREFRONT, DOOR, & HARDWARE SCHEDULES

SHEET:
A600

1/10/2024 1:39:42 PM
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A600-STOREFRONT, DOOR, & HARDWARE SCHEDULES

5.2D - PLAN SET

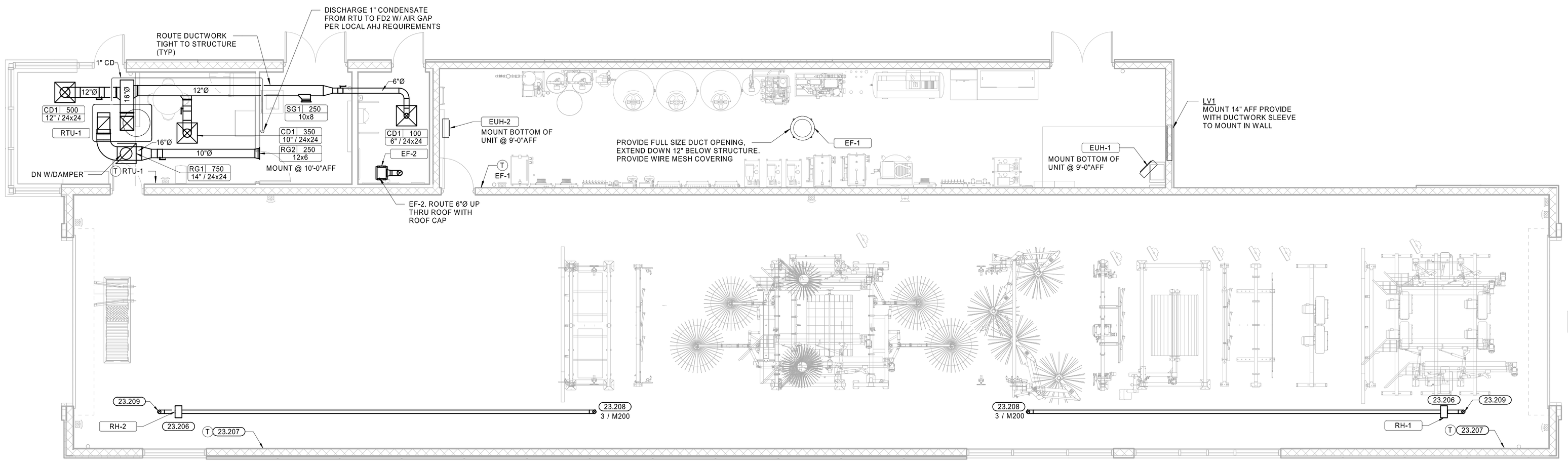
KEYNOTES	
23.206	SUSPEND GAS FIRED TUBE HEATER FROM CEILING STRUCTURE 12'-0" AFF MOUNTING HEIGHT. MAINTAIN MANUFACTURER REQUIRED CLEARANCES ON ALL SIDES. VERIFY EXACT MOUNTING LOCATION WITH OWNER PRIOR TO CONSTRUCTION.
23.207	INSTALL THERMOSTAT IN WATERPROOF BOX AND COORDINATE LOCATION OF THERMOSTAT WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
23.208	4" GAS FLUE UP THRU ROOF. TERMINATE WITH APPROVED VENT CAP.
23.209	PROVIDE COMBUSTION AIR INTAKE THRU ROOF FOR TUBE HEATER. SIZE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

MECHANICAL SYMBOLS

18/12	RECTANGULAR DUCT 18" WIDE BY 12" DEEP
12"	12" DIAMETER ROUND DUCT
	SUPPLY DUCT IN SECTION
	RETURN OR EXHAUST DUCT IN SECTION
	ELBOW WITH TURNING VANES
	ROUND (OR OVAL) ELBOW
	SUPPLY AIR DIFFUSER WITH ROUND SUPPLY DUCT
	RETURN OR EXHAUST AIR DIFFUSER WITH ROUND DUCT
X | XXX 8" / 24x24	DIFFUSER OR GRILLE TYPE / CFM BRANCH DUCT & NECK SIZE / FACE SIZE
	MANUAL BALANCE DAMPER
T RH1	THERMOSTAT
S	REMOTE TEMPERATURE SENSOR
H	HUMIDISTAT AND SENSOR
A	ALARM ANNUNCIATOR
D	DUCT SMOKE DETECTOR
F	FIRE DAMPER WITH ACCESS DOOR

GENERAL NOTES

1. ALL MECHANICAL HVAC AND PLUMBING WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE BASE BUILDING SPECIFICATION AND WITH THE LATEST EDITION OF THE PREVAILING STATE MECHANICAL, PLUMBING, FUEL AND GAS AND BUILDING CODES AS WELL AS ALL REGULATIONS THAT MAY APPLY. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE THE MORE STRINGENT STANDARD SHALL APPLY.
2. COORDINATE EXACT LOCATIONS OF AIR DISTRIBUTION DEVICES WITH CEILING AND LIGHT FIXTURE LAYOUT - VERIFY WITH THE ARCHITECT.
3. ALL RECTANGULAR SUPPLY DUCTS ELBOWS SHALL HAVE SINGLE THICKNESS TURNING VANES.
4. ALL AIR CONDITIONING DUCTWORK SHALL BE SMACNA 2" PRESSURE CLASSIFICATION WITH SEAL CLASS 'A.' ALL EXPOSED ROUND DUCTWORK SHALL BE SPIRAL LOCK-SEAM WITH SELF-SEALING JOINTS AND FITTINGS.
5. RECTANGULAR DUCT SIZES SHOWN ARE ACTUAL INSIDE CLEAR DIMENSIONS. SHEET METAL CONTRACTORS SHALL INCREASE SIZES FOR DUCTWORK REQUIRED TO BE LINED TO ALLOW FOR 1-1/2-INCH THICK LINER EQUIVALENT TO KNAUF TYPE "ATMOSPHERE" - MINIMUM R-VALUE 6.0.
6. EXPOSED ROUND DUCT SIZES SHOWN INDICATE REQUIRED AIRFLOW SIZES. SHEETMETAL CONTRACTOR SHALL INCREASE SIZES TO ALLOW FOR 1-1/2-INCH THICK LINER EQUIVALENT TO CERTAINTEED TOUGHGARD SPIRAL DUCT LINER - MINIMUM R-VALUE OF 6.0.
7. COORDINATE ROUTING OF DUCTWORK WITHIN STRUCTURE WITH THE LOCATION OF COLUMNS, JOIST AND BEAMS.
8. ALL CONCEALED ROUND AIR CONDITIONING DUCTWORK SHALL HAVE 2-INCH THICK EXTERIOR DUCT WRAP CONSISTING OF A FIBERGLASS BLANKET WITH FACTORY APPLIED VAPOR BARRIER FACING AND HAVING A MINIMUM R-VALUE OF 5.6, UNLESS NOTED OTHERWISE.
9. UNLESS DIMENSIONED, THE WORK SHOWN ON THE CONTRACT DRAWINGS IS DIAGRAMMATIC, ILLUSTRATING THE GENERAL ARRANGEMENT. CONTRACTOR SHALL ADHERE TO ARRANGEMENT SHOWN AS CLOSELY AS THE ACTUAL CONSTRUCTION WILL PERMIT.
10. CONTRACTOR SHALL VERIFY EXACT EQUIPMENT DIMENSIONS, CLEARANCES, AND FIELD DIMENSIONS RELATIVE TO LOCATIONS OF STRUCTURAL FRAMING. CHANGES REQUIRED IN ROUTING OR SIZES OF DUCTWORK TO MAKE WORK SHOWN CONFORM TO PROJECT REQUIREMENTS RESULTING FROM FIELD COORDINATION PROBLEMS SHALL BE IDENTIFIED, ILLUSTRATED, AND SUBMITTED TO THE ENGINEER FOR PRIOR REVIEW AND APPROVAL BEFORE INSTALLATION.



1 MECHANICAL PLAN

3/16" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

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CHECKED BY:	JPJ
DRAWN BY:	JAS
DOCUMENT DATE:	01/10/23

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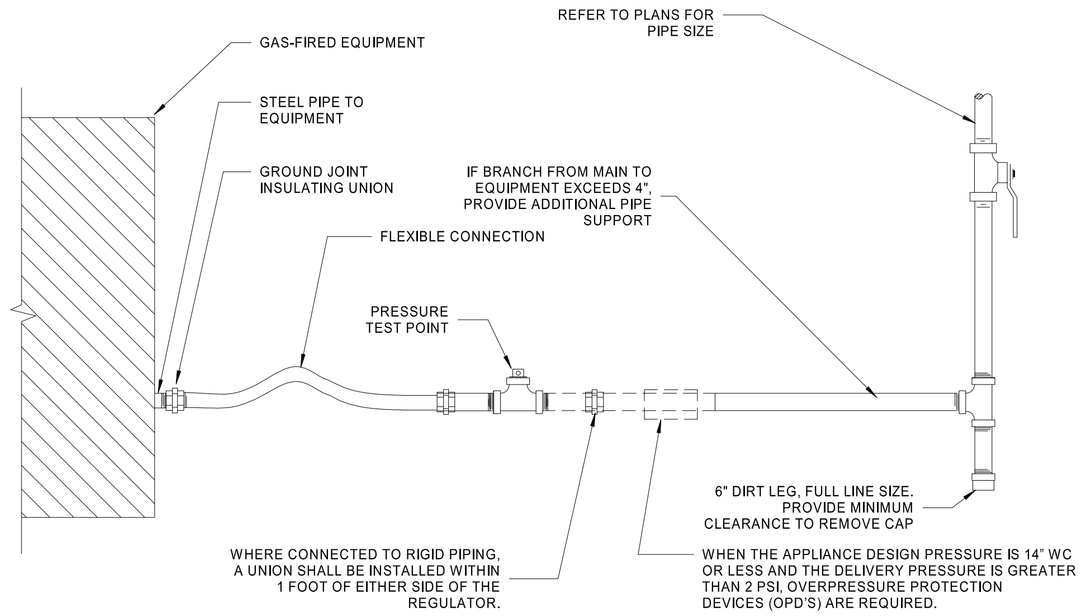
PROFESSIONAL ENGINEER
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota
Print Name: **John L. Mullins**
License #: 44028
Signature:
Date:

MECHANICAL PLAN

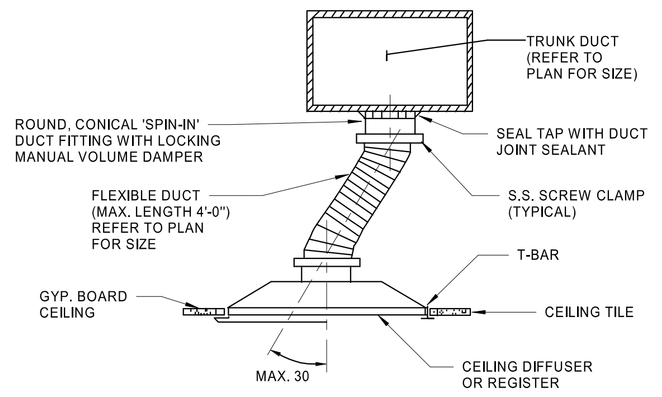
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M100

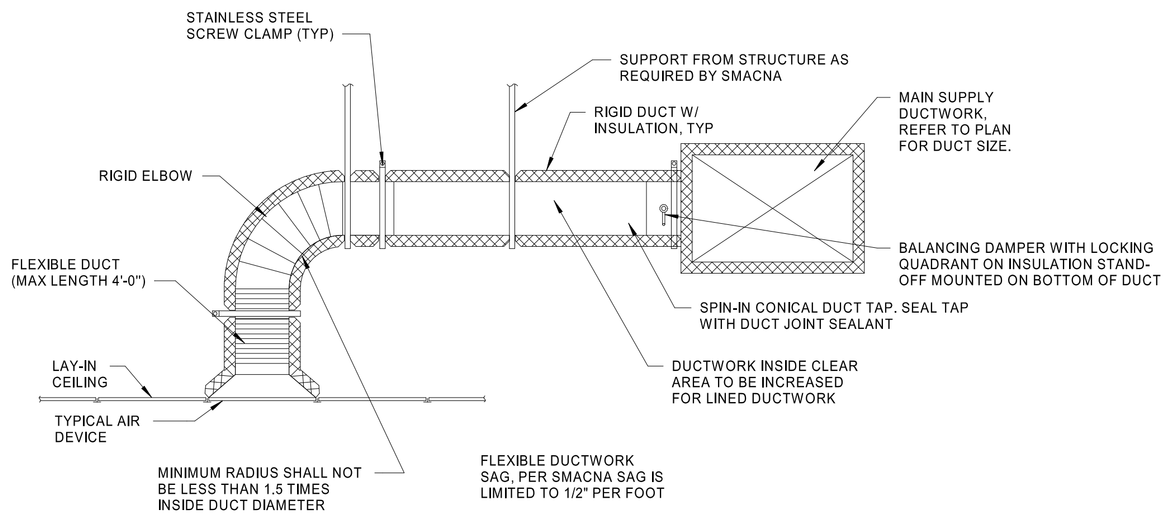
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M100-ME(CHANICAL PLAN

5.2D - PLAN SET

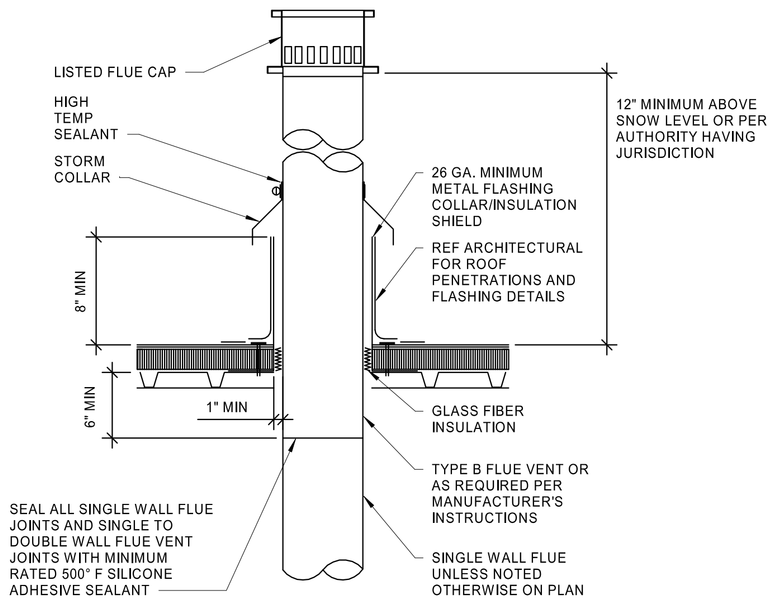


4 EQUIPMENT GAS CONNECTION
NTS

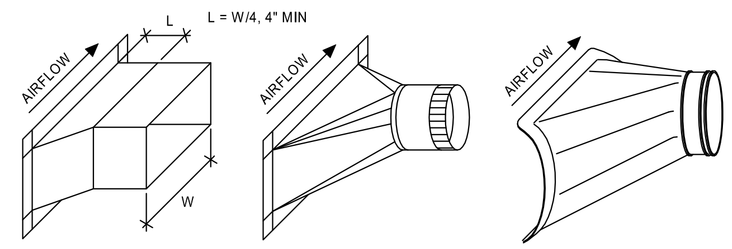




1 DIFFUSER CONNECTION DETAIL
NTS



3 FLUE THRU ROOF
NTS



1. SPIN-IN FITTINGS W/ SCOOPS ARE NOT ACCEPTABLE.
2. REF PLANS FOR RUNOUT SIZES.
3. 45° LEAD IN.

2 BRANCH DUCT FITTING
NTS

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8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

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DOCUMENT DATE:	01/10/23

2024.01.10 13:34:39-06'00'

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Signature:
Date:
License #: 44028

MECHANICAL DETAILS

SHEET:
M200

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M200-MECHANICAL DETAILS

5.2D - PLAN SET

PACKAGED ROOFTOP UNIT SCHEDULE

MARK	AREA SERVED	BASIS OF DESIGN		NOMINAL CAPACITY (TONS)	FAN				DX COOLING							NATURAL GAS HEATING				FILTER TYPE	ELECTRICAL DATA				WEIGHT (LBS)	NOTES
									ENTERING AIR		LEAVING AIR		TOTAL COOLING (Btu/h)	SENSIBLE COOLING (Btu/h)	SEER	ENT. AIR DB (°F)	LVG. AIR DB (°F)	INPUT (Btu/h)	OUTPUT (Btu/h)		VOLTS	PHASE	MCA (AMPS)	MOCP (AMPS)		
		MANUFACTURER	MODEL		SUPPLY AIR CFM	OUTSIDE AIR FLOW	EXTERNAL STATIC	NOM. MOTOR	DB (°F)	WB (°F)	DB (°F)	WB (°F)														
RTU-1	OFFICES	TRANE	YHC036	3.0	1200	200	0.50	0.75	77.6	64.9	56.4	54.6	37350	27370	15	56.5	93.8	60	48	MERV-8	208	3	21	30	767	1-10

NOTES:
1. UNITS AND CURB FURNISHED AND INSTALLED BY GC.
2. SMOKE DETECTORS SHALL BE SHIPPED LOOSE AND FIELD INSTALLED. INSTALL SMOKE DETECTORS IN THE SUPPLY AND RETURN.
3. PROVIDE UNITS WITH SINGLE POINT POWER CONNECTIONS AND ELEC DISCONNECT.
4. UNIT ENERGY EFFICIENCY RATINGS (EER) PER ARI 210 & 240.
5. PROVIDE UNITS WITH MOTORIZED OUTSIDE AIR DAMPERS.
6. PROVIDE UNITS WITH NON-POWERED FACTORY CONVENIENCE GFCI OUTLET.
7. PROVIDE UNITS WITH HAIL-GUARDS.
8. PROVIDE UNITS WITH 2 SETS OF 2" MERV 11 FILTERS (1ST SET TO USE DURING CONSTRUCTION AND INSTALL 2ND SET AT TURNOVER).
9. PROVIDE 7-DAY PROGRAMMABLE T-STAT. REFER TO SPECIFICATIONS.
10. PROVIDE WITH INTERNAL FLOAT SWITCH TO SHUT DOWN IF PRIMARY DRAIN BECOMES RESTRICTED. ROUTE 1" CONDENSATE LINE AS SHOWN TO FLOOR DRAIN IN STORAGE ROOM WITH AIR GAP PER AHJ REQUIREMENTS.

AIR DEVICE SCHEDULE

TYPE	SERVICE	MANUFACTURER	MODEL	STYLE	MOUNTING	FACE SIZE	NOTES
CD1	SUPPLY	PRICE	ASCD	SQUARE CONE DIFFUSER	LAY-IN	24x24	1-6
RG1	RETURN	PRICE	80F	EGG CRATE GRILLE	LAY-IN	24x24	1-6
RG2	RETURN	PRICE	600	FIXED-BLADE LOUVERED GRILLE	SURFACE	12x6	1-6
SG1	SUPPLY	PRICE	SDG	ADJUSTABLE-BLADE LOUVERED GRILLE	SPIRAL DUCT	10x8	1-6

NOTES:
1. BORDER TYPES SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE FOR THE ROOM IN WHICH THE AIR DEVICE IS LOCATED.
2. SEE HVAC PLANS FOR LOCATION AND AIR QUANTITIES OF EACH AIR DEVICE.
3. ALL AIR DEVICES SHALL BE TESTED IN ACCORDANCE WITH ASHRAE STANDARD 70-91.
4. ALUMINUM CONSTRUCTION.
5. COLOR: WHITE.
6. BRANCH DUCT SIZE SAME AS NECK SIZE UNLESS OTHERWISE NOTED.
7. PRICE AIR SCOOP FOR BALANCING.

VOLUME/BALANCE DAMPER SCHEDULE

TYPE	MANUFACTURER/MODEL		
ROUND	AES WMVCD	RUSKIN WMVCD	SISNEROS BROTHERS SBWM-VCD
RECTANGULAR	AES AMD4	RUSKIN WMD25	SISNEROS BROTHERS SBR-VCD

EXHAUST FAN SCHEDULE

MARK	AREA SERVED	MANUFACTURER	MODEL	DESIGN AIRFLOW (CFM)	EXT. S.P. (IN-WG)	VOLTS	PHASE	HP	DRIVE	WEIGHT	NOTES
EF-1	EQUIPMENT ROOM	GREENHECK	G-160-C	2000	0.50	115	1	0.25	DIRECT	101	1-5
EF-2	RESTROOM	GREENHECK	SP-A125	115	0.25	115	1	0.03	DIRECT	20	1,3,4,5,6

GENERAL INFORMATION (ALL UNITS):
A. FANS MUST BE UL OR ETL LISTED.
B. REFER TO SPECIFICATIONS.

NOTES:
1. FURNISH WITH GRAVITY BACKDRAFT DAMPER AND BIRDSCREEN.
2. CONTRACTOR TO PROVIDE LOW VOLTAGE THERMOSTAT REFER TO PLANS FOR LOCATION. FAN TO BE INTERLOCKED WITH THERMOSTAT. FAN TO BE ENERGIZED WHEN THERMOSTAT IS 85 DEGREES OR WARMER.
3. FACTORY DISCONNECT.
4. PROVIDE FAN SPEED CONTROLLER.
5. INCLUDE VIBRATION ISOLATOR KIT.
6. INTERLOCK FAN WITH LIGHT SWITCH.

AIR BALANCE

MARK	OUTSIDE AIRFLOW (CFM)	EXHAUST AIRFLOW (CFM)
EF-2		100
RTU-1	200	

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL	SIZE (IN)	TYPE	MAX AIRFLOW RATE (CFM)	STATIC PRESSURE DROP (IN H2O)	AIR VELOCITY (FPM)	NOTES
LV1	GREENHECK	EAD-635	36x24	INTAKE	2000	0.07	702	1-2

NOTES:
1. PROVIDE BIRD SCREEN.
2. PROVIDE WITH FACTORY MOUNTED ELECTRIC ACTUATOR. INTERLOCK WITH EQUIPMENT ROOM EXHAUST FAN. LOUVER TO OPEN WHEN FAN IS ENERGIZED.

ELECTRIC UNIT HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	CONTROL METHOD	ELECTRICAL DATA		HEATING INPUT (KW)	WEIGHT	NOTES
				V	PH			
EUH-1	MARKEL	F2FUH05C03	T-STAT	208	1	5	44	1-2
EUH-2	MARKEL	F2FUH05C03	T-STAT	208	1	5	44	1-2

NOTES:
1. PROVIDE WITH WALL BRACKET.
2. PROVIDE WITH INTEGRAL THERMOSTAT. SET TO 40 DEGREES F.

RADIANT HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	CONTROL METHOD	ELECTRICAL DATA		HEAT INPUT (BTU/H)	WEIGHT	NOTES
				V	PH			
RH-1	ROBERTS GORDON	HEV-100	TSTAT	120	1	100	75	1-4
RH-2	ROBERTS GORDON	HEV-100	TSTAT	120	1	100	75	1-4

NOTES:
1. CONTROLLED BY SINGLE LOW-VOLTAGE THERMOSTAT. SEE FLOOR PLAN.
2. PROVIDE 45 DEGREE REFLECTOR, ANGLE TO REFLECT TOWARD CARWASH EQUIPMENT.
3. MOUNT AT 12'-0" AFF.
4. LENGTH OF STRAIGHT TUBE 40 FEET.

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

PERMIT	01/10/23

CHECKED BY:	JPJ
DRAWN BY:	JAS
DOCUMENT DATE:	01/10/23

2024.01.10 13:35:08-06'00'

PROFESSIONAL ENGINEER
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Print Name: **John L. Mullins** License #: **44028**
Signature:
Date:

MECHANICAL SCHEDULES

SHEET: M201

1/10/2024 11:43:34 AM
C:\Users\joshua.stratton\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_MEP_V22_HFA Joshua Stratton.rvt
Admin MEC(CHANICAL SCHEDULES

5.2D - PLAN SET

DIVISION 15

15A: GENERAL

15A 1-1 GENERAL REQUIREMENTS

REQUIREMENTS UNDER DIVISION ONE AND THE GENERAL AND SUPPLEMENTARY CONDITIONS OF THESE SPECIFICATIONS SHALL BE A PART OF THIS SECTION. CONTRACTOR SHALL BECOME THOROUGHLY ACQUAINTED WITH ITS CONTENTS AS TO REQUIREMENTS THAT AFFECT THIS DIVISION OR SECTION. THE WORK REQUIRED UNDER THIS SECTION INCLUDES MATERIAL, EQUIPMENT, APPLIANCES, TRANSPORTATION, SERVICES, AND LABOR REQUIRED TO COMPLETE THE ENTIRE SYSTEM AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.

THE SPECIFICATIONS AND DRAWINGS FOR THE PROJECT ARE COMPLEMENTARY, AND PORTIONS OF THE WORK DESCRIBED IN ONE, SHALL BE PROVIDED AS IF DESCRIBED IN BOTH. IN THE EVENT OF DESCREPANCIES, NOTIFY THE ENGINEER AND/OR OWNER AND REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK INVOLVED.

15A 1-2 INSPECTION OF SITE

PRIOR TO SUBMITTING BID, VISIT THE SITE OF THE PROPOSED WORK AND BECOME FULLY INFORMED AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. FAILURE TO DO SO WILL NOT BE CONSIDERED SUFFICIENT JUSTIFICATION TO REQUEST OR OBTAIN EXTRA COMPENSATION OVER AND ABOVE THE CONTRACT PRICE.

15A 1-3 MATERIAL AND WORKMANSHIP

PROVIDE NEW MATERIAL, EQUIPMENT, AND APPARATUS UNDER THIS CONTRACT UNLESS OTHERWISE STATED HEREIN, OF BEST QUALITY NORMALLY USED FOR THE PURPOSE IN GOOD COMMERCIAL PRACTICE, AND FREE FROM ANY DEFECTS. MODEL NUMBERS LISTED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS ARE NOT NECESSARLY INTENDED TO DESIGNATE THE REQUIRED TRIM, WRITTEN DESCRIPTIONS OF THE TRIM GOVERN MODEL NUMBERS.

WORK PERFORMED UNDER THIS CONTRACT SHALL PROVIDE A NEAT AND "WORKMANLIKE" APPEARANCE WHEN COMPLETED, TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER. WORKMANSHIP SHALL BE THE FINEST POSSIBLE BY EXPERIENCED TECHNICIANS. INSTALLATIONS SHALL COMPLY WITH APPLICABLE CODES AND LAWS.

THE COMPLETE INSTALLATION SHALL FUNCTION AS DESIGNED AND INTENDED WITH RESPECT TO EFFICIENCY, CAPACITY, NOISE LEVEL, ETC. ABNORMAL NOISE CAUSED BY RATTLING EQUIPMENT, PIPING, DUCTS, AIR DEVICES, AND SQUEAKS IN ROTATING COMPONENTS WILL NOT BE ACCEPTABLE. IN GENERAL, MATERIALS AND EQUIPMENT SHALL BE OF COMMERCIAL SPECIFICATION GRADE IN QUALITY. LIGHT DUTY AND RESIDENTIAL TYPE EQUIPMENT WILL NOT BE ACCEPTED.

REMOVE FROM THE PREMISES WASTE MATERIAL PRESENT AS A RESULT OF WORK, INCLUDING CARTONS, CRATING, PAPER, STICKERS, AND/OR EXCAVATION MATERIAL NOT USED IN BACKFILLING, ETC. CLEAN EQUIPMENT INSTALLED UNDER THIS CONTRACT TO PRESENT A NEAT AND CLEAN INSTALLATION AT THE TERMINATION OF THE WORK.

REPAIR OR REPLACE PUBLIC AND PRIVATE PROPERTY DAMAGED AS A RESULT OF WORK PERFORMED UNDER THIS CONTRACT TO THE SATISFACTION OF AUTHORITIES AND REGULATIONS HAVING JURISDICTION.

15A 1-4 COORDINATION

COORDINATE WORK WITH THAT OF OTHER TRADES SO THAT THE VARIOUS COMPONENTS OF THE SYSTEMS WILL BE INSTALLED AT THE PROPER TIME, WILL FIT THE AVAILABLE SPACE, AND WILL ALLOW PROPER SERVICE ACCESS TO THOSE ITEMS REQUIRING MAINTENANCE. COMPONENTS WHICH ARE INSTALLED WITHOUT REGARD TO THE ABOVE SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.

UNLESS OTHERWISE INDICATED, THE GENERAL CONTRACTOR WILL PROVIDE CHASES AND OPENINGS IN BUILDING CONSTRUCTION REQUIRED FOR INSTALLATION OF THE SYSTEMS SPECIFIED HEREIN. CONTRACTOR SHALL FURNISH THE GENERAL CONTRACTOR WITH INFORMATION WHERE CHASES AND OPENINGS ARE REQUIRED. KEEP INFORMED AS TO THE WORK OF OTHER TRADES ENGAGED IN THE CONSTRUCTION OF THE PROJECT, AND EXECUTE WORK IN A MANNER AS TO NOT INTERFERE WITH OR DELAY THE WORK OF OTHER TRADES.

FIGURED DIMENSIONS SHALL BE TAKEN IN PREFERENCE TO SCALE DIMENSIONS. CONTRACTOR SHALL TAKE HIS OWN MEASUREMENTS AT THE BUILDING, AS VARIATIONS MAY OCCUR. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ERRORS THAT COULD HAVE BEEN AVOIDED BY PROPER CHECKING AND INSPECTION.

PROVIDE MATERIALS WITH TRIM THAT WILL PROPERLY FIT THE TYPES OF CEILING, WALL, OR FLOOR FINISHES ACTUALLY INSTALLED. MODEL NUMBERS LISTED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS ARE NOT INTENDED TO DESIGNATE THE REQUIRED TRIM.

CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR DUCTWORK LAYOUT TO THE CONSTRUCTION MANAGER FOR OWNER APPROVAL PRIOR TO INSTALLATION.

15A 1-5 ORDINANCES AND CODES

WORK PERFORMED UNDER THIS CONTRACT SHALL, AT A MINIMUM, BE IN CONFORMANCE WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES HAVING JURISDICTION. EQUIPMENT FURNISHED AND ASSOCIATED INSTALLATION WORK PERFORMED UNDER THIS CONTRACT SHALL BE IN STRICT COMPLIANCE WITH CURRENT APPLICABLE CODES ADOPTED BY THE LOCAL AHJ INCLUDING ANY AMENDMENTS AND STANDARDS AS SET FORTH BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), UNDERWRITERS LABORATORIES (UL), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AMERICAN SOCIETY OF MECHANICAL ENGINEEERS (ASME), AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) AND OTHER NATIONAL STANDARDS AND CODES WHERE APPLICABLE. WHERE THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THEIR REFERENCED CODES, STANDARDS, ETC., THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE.

PROCURE AND PAY FOR PERMITS AND LICENSES REQUIRED FOR THE ACCOMPLISHMENT OF THE WORK HEREIN DESCRIBED. WHERE REQUIRED, OBTAIN, PAY FOR AND FURNISH CERTIFICATES OF INSPECTION TO OWNER. CONTRACTOR WILL BE HELD RESPONSIBLE FOR VIOLATIONS OF THE LAW.

15A 1-6 PROTECTION OF EQUIPMENT AND MATERIALS

STORE AND PROTECT FROM DAMAGE EQUIPMENT AND MATERIALS DELIVERED TO JOB SITE. COVER WITH WATERPROOF, TEAR-RESISTANT, HEAVY TARP OR POLYETHEYLENE PLASTIC AS REQUIRED TO PROTECT FROM PLASTER, DIRT, PAINT, WATER, OR PHYSICAL DAMAGE. EQUIPMENT AND MATERIAL THAT HAS BEEN DAMAGED BY CONSTRUCTION ACTIVITIES WILL BE REJECTED, AND CONTRACTOR IS OBLIGATED TO FURNISH NEW EQUIPMENT AND MATERIAL OF A LIKE KIND.

KEEP PREMISES CLEAN FROM FOREIGN MATERIAL CREATED DURING WORK PERFORMED UNDER THIS CONTRACT. PIPING, EQUIPMENT, ETC., SHALL HAVE A NEAT AND CLEAN APPEARANCE AT THE TERMINATION OF THE WORK.

PLUG OR CAP OPEN ENDS OF DUCTWORK AND PIPING SYSTEMS WHILE STORED OR INSTALLED DURING CONSTRUCTION WHEN NOT IN USE TO PREVENT THE ENTRANCE OF DEBRIS INTO THE SYSTEMS.

KEEP THE MANUFACTURER PROVIDED PROTECTIVE COVERINGS ON FLOOR DRAINS, FLOOR SINKS, AND TRENCH DRAINS DURING CONSTRUCTION. REMOVE COVERINGS AT THE TERMINATION OF THE WORK AND POLISH EXPOSED SURFACES.

15A 1-7 OPERATION AND MAINTENANCE INSTRUCTIONS

COLLECT AND COMPILE A COMPLETE BROCHURE OF FIXTURES, MATERIALS, AND EQUIPMENT FURNISHED AND INSTALLED ON THIS PROJECT. INCLUDE OPERATIONAL AND MAINTENANCE INSTRUCTIONS, MANUFACTURER'S CATALOG SHEETS, WIRING DIAGRAMS, PARTS LISTS, APPROVED SHOP DRAWINGS, AND DESCRIPTIVE LITERATURE FURNISHED BY THE MANUFACTURER. INCLUDE AN INSIDE COVER SHEET THAT LISTS THE PROJECT NAME, DATE, OWNER, ARCHITECT, ENGINEER, GENERAL CONTRACTOR, SUB-CONTRACTOR, AND AN INDEX OF CONTENTS.

SUBMIT COPIES OF LITERATURE BOUND IN APPROVED BINDERS TO THE ARCHITECT AND OWNER AT THE TERMINATION OF THE WORK. PAPER CLIPS, STAPLES, RUBBER BANDS, AND MAILING ENVELOPES ARE NOT CONSIDERED APPROVED BINDERS. FINAL APPROVAL OF PLUMBING SYSTEMS WILL BE WITHHELD UNTIL THIS EQUIPMENT BROCHURE IS DEEMED COMPLETE BY THE ARCHITECT, ENGINEER, AND OWNER.

15A 1-8 WARRANTIES

WARRANT EACH SYSTEM AND EACH ELEMENT THEREOF AGAINST ALL DEFECTS DUE TO FAULTY WORKMANSHIP, DESIGN OR MATERIAL FOR A PERIOD OF 12 MONTHS FROM DATE OF SUBSTANTIAL COMPLETION, UNLESS SPECIFIC ITEMS ARE NOTED TO CARRY A LONGER WARRANTY IN THE CONSTRUCTION DOCUMENTS OR MANUFACTURER'S STANDARD WARRANTY EXCEEDS 12 MONTHS. REMEDY ALL DEFECTS, OCCURRING WITHIN THE WARRANTY PERIOD(S), AS STATED IN THE GENERAL CONDITIONS AND DIVISION 1.

WARRANTIES SHALL INCLUDE LABOR AND MATERIAL. MAKE REPAIRS OR REPLACEMENTS WITHOUT ANY ADDITIONAL COSTS TO THE OWNER.

PERFORM THE REMEDIAL WORK PROMPTLY, UPON WRITTEN NOTICE FROM THE ENGINEER OR OWNER.

AT THE TIME OF SUBSTANTIAL COMPLETION, DELIVER TO THE OWNER ALL WARRANTIES, IN WRITING AND PROPERLY EXECUTED, INCLUDING TERM LIMITS FOR WARRANTIES EXTENDING BEYOND THE ONE YEAR PERIOD, EACH WARRANTY INSTRUMENT BEING ADDRESSED TO THE OWNER AND STATING THE COMMENCEMENT DATE AND TERM.

15A 1-9 CUTTING AND PATCHING

PERFORM CUTTING OF WALLS, FLOORS, CEILINGS, ETC. AS REQUIRED TO INSTALL WORK UNDER THIS SECTION. OBTAIN PERMISSION FROM THE ARCHITECT PRIOR TO CUTTING. DO NOT CUT OR DISTURB STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL FROM THE ARCHITECT. CUT HOLES AS SMALL AS POSSIBLE. GENERAL CONTRACTOR SHALL PATCH WALLS, FLOORS, ETC. AS REQUIRED BY WORK UNDER THIS SECTION. PATCHING SHALL MATCH THE ORIGINAL MATERIAL AND CONSTRUCTION. REPAIR AND REFINISH AREAS DISTURBED BY WORK TO THE CONDITION OF ADJOINING SURFACES IN A MANNER SATISFACTORY TO THE ARCHITECT.

15A 1-10 ROUGH-IN

COORDINATE WITHOUT DELAY ROUGHING-IN WITH GENERAL CONSTRUCTION. CONCEAL PIPING AND CONDUIT ROUGH-IN EXCEPT IN UNFINISHED AREAS AND WHERE OTHERWISE SHOWN.

15A 1-11 STRUCTURAL STEEL

STRUCTURAL STEEL USED FOR PIPE SUPPORTS, EQUIPMENT SUPPORTS, ETC., SHALL BE NEW, CLEAN, AND CONFORM TO ASTM DESIGNATION A-36.

SUPPORT PLUMBING AND MECHANICAL EQUIPMENT AND PIPING FROM THE BUILDING STRUCTURE. DO NOT SUPPORT PLUMBING EQUIPMENT FROM CEILINGS, OTHER MECHANICAL OR ELECTRICAL COMPONENTS, AND OTHER NON-STRUCTUREAL ELEMENTS.

15A 1-12 ACCESS DOORS

PROVIDE ACCESS DOORS IN CEILINGS AND WALLS WHERE INDICATED OR REQUIRED FOR ACCESS TO CONCEALED VALVES AND EQUIPMENT INSTALLED UNDER THIS SECTION. PROVIDE CONCEALED HINGES, SCREWDRIVER-TYPE LOCK, ANCHOR STRAPS; MANUFACTURED BY MILCOR, ZURN, TITUS, OR EQUAL. OBTAIN ARCHITECT'S APPROVAL OF TYPE, SIZE, LOCATION, AND COLOR BEFORE ORDERING.

15A 1-13 PENETRATIONS

SEAL FLOOR, EXTERIOR WALL AND ROOF PENETRATIONS WATER AND WEATHERTIGHT WITH APPROPRIATE NON-SHRINK, NON-HARDENING COMMERCIAL CONSTRUCTION SEALANT. SEAL ROOF PENETRATIONS WITH 4 POUND PER SQUARE FOOT LEAD FLASHING. PROVIDE A SLEEVE, AND SEAL NON-FIRE-RATED FLOOR AND WALL PENETRATIONS WITH FIBERGLASS PACKING AND SILICONE CAULK (FOR ACOUSTICAL INSULATION).

COORDINATED FIRE RATING REQUIREMENTS AND LOCATIONS WITH THE ARCHITECT. SEAL PENETRATIONS OF FIRE-RATED ASSEMBLIES WITH 3M # CP-25 FIRE BARRIER CAULK (PROVIDE THICKNESS AND METHOD AS REQUIRED AND RECOMMENDED BY MANUFACTURER) TO MAINTAIN THE FIRE RESISTANCE RATING OF FIRE-RATED ASSEMBLIES.

SEAL EXTERIOR WALL PENETRATIONS BELOW GRADE WITH CAST IRON WALL PIPES AND MODULAR MECHANICAL SLEEVE SEALS, MANUFACTURED BY THUNDERLINE/LINK SEAL, CALPICO, INC AND METRAFLEX.

PROVIDE SLEEVES FOR HORIZONTAL PIPE PASSING THROUGH OR UNDER FOUNDATION. SLEEVES SHALL BE CAST IRON SOIL PIPE TWO NOMINAL PIPE SIZES LARGER THAN THE PIPE SERVED.

PROVIDE SLEEVES FOR VERTICAL PIPE PASSING THROUGH SLAB ON GRADE. SLEEVES SHALL BE SCHEDULE 40 PVC PIPE, TWO NOMINAL PIPE SIZES LARGER THAN THE PIPE SERVED. SEAL WATER-TIGHT WITH SILICONE CAULK.

15B: HEATING, VENTILATION, AND AIR CONDITIONING

15B 1-1 DUCTWORK

ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS CORRESPONDING TO THE SYSTEM PRESSURE. DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR A TWO-INCH PRESSURE RATING AND SEAL CLASS A.

SUPPLY AND RETURN DUCTWORK INSIDE THE BUILDING SHALL BE INSULATED WITH 1" THICK ACOUSTICAL LINING WITH A MINIMUM R-VALUE OF 6 OR EXTERNALLY WRAPPED WITH 2" THICK GLASS FIBER DUCT WRAP. INSULATE SUPPLY AND RETURN DUCTWORK LOCATED OUTSIDE THE BUILDING WITH 2" LINER AND SEAL SEAMS WEATHER TIGHT WITH TOTAL MINIMUM R-VALUE OF 12, PROVIDE WEATHER JACKET ACCORDINGLY. DEDICATED OUTSIDE AIR SUPPLY DUCTWORK LOCATED WITHIN THE BUILDING SHALL BE INSULATED WITH 2" DUCT WRAP WITH A MINIMUM R-VALUE OF 6.

EXPOSED DUCTWORK SHALL NOT HAVE ANY INSULATION.

FLEXIBLE DUCTWORK MAINS ARE NOT PERMITTED. PROVIDE MAXIMUM 5'-0" FLEXIBLE DUCT CONNECTIONS TO CEILING DIFFUSERS

FURNISH AND INSTALL VOLUME/BALANCE DAMPERS AT ALL BRANCH DUCTS TO DIFFUSERS. LOCATE DAMPERS A MINIMUM OF 4'-0" AWAY FROM DIFFUSERS.

INSTALL VTR'S, EXHAUST FANS, AND FLUES A MINIMUM OF 5'-0" FROM PARAPET OR OUTSIDE WALL AND 10'-0" MINIMUM FROM EQUIPMENT WITH OUTSIDE AIR INTAKE.

15B 1-2 ELECTRICAL WIRING

LINE VOLTAGE WIRING SHALL BE FURNISHED BY DIVISION 16. LINE VOLTAGE CONTROL AND INTERLOCK WIRING FOR MECHANICAL SYSTEMS SHALL ALSO BE FURNISHED BY DIVISION 16 CONTRACTOR. LOW VOLTAGE CONTROL WIRING SHALL BE BY THE DIVISION 15 CONTRACTOR. PROVIDE WIRING DIAGRAMS TO THE DIVISION 16 CONTRACTOR AS REQUIRED FOR PROPER EQUIPMENT HOOKUP. COORDINATE WITH THE DIVISION 16 CONTRACTOR THE ACTUAL WIRE SIZING AMPS FOR MECHANICAL EQUIPMENT (FROM THE EQUIPMENT NAMEPLATE) TO ENSURE PROPER INSTALLATION.

ALL TEMPERATURE SENSORS, FAN SWITCHES, AND SPEED CONTROLS SHALL BE INSTALLED 48" ABOVE THE FLOOR FOR ADA REQUIREMENTS.

15B 1-3 FINAL TESTING AND ADJUSTMENTS

AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCE CONTRACTOR. BALANCE EACH SUPPLY, RETURN, OUTSIDE AIR DEVICE WITHIN 5% OF REQUIREMENTS AND FURNISH A REPORT TO THE CONSTRUCTION MANAGER. THE ENTIRE HVAC SYSTEM MUST BE FULLY OPERABLE, BALANCED, AND APPROVED BY OWNER'S REPRESENTATIVE ON THE DAY TENANT OPENS FOR BUSINESS.

ADJUST THERMOSTATS AND CONTROL DEVICES TO OPERATE AS INTENDED. ADJUST BURNERS, PUMPS, FANS, ETC. FOR PROPER AND EFFICIENT OPERATION. CERTIFY TO ARCHITECT THAT ADJUSTMENTS HAVE BEEN MADE AND THAT SYSTEM IS OPERATING SATISFACTORILY. A TEST AND BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. CALIBRATE, SET AND ADJUST AUTOMATIC TEMPERATURE CONTROLS. CHECK PROPER SEQUENCING OF INTERLOCK SYSTEMS, AND OPERATION OF SAFETY CONTROLS.

15C: PLUMBING

15C 1-1 PIPING MATERIALS

MATERIALS SPECIFIED OR NOTED ON THE DRAWINGS ARE SUBJECT TO THE APPROVAL OF LOCAL CODE AUTHORITIES. VERIFY APPROVAL BEFORE INSTALLING ANY MATERIAL OR JOINING METHOD.

DOMESTIC WATER (COLD, HOT, SOFT): DOMESTIC WATER PIPING INSTALLED ABOVE THE FLOOR SLAB INSIDE THE BUILDING SHALL BE TYPE "L" HARD TEMPER COPPER TUBE WITH WROUGHT COPPER FITTINGS.

FITTINGS AND SOLDERED CONNECTIONS MADE UP WITH 95/5 SOLDER. BRAZED MECHANICALLY FORMED TEE CONNECTIONS (T-DRILL) MAY BE USED IN COPPER LINES WHERE APPROVED BY CODE. CONNECTION SHALL BE MADE WITH BRAZED SILVER SOLDER (SILFOS) JOINTS IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.

UNDERGROUND DOMESTIC WATER PIPING SHALL BE TYPE "K" HARD TEMPER COPPER TUBING WITH CONVENTIONAL WROUGHT COPPER FITTINGS AND SILVER SOLDER (SILFOS) JOINTS. INSTALL AS FEW UNDERGOUND COPPER PIPING JOINTS AS POSSIBLE. AT BUILDING SERVICE ENTRANCE, NO JOINTS SHALL BE INSTALLED UNDER OR WITHIN 5 FEET OF THE BUILDING. INSTALL DOMESTIC WATER PIPING BELOW GRADE OUTSIDE BUILDING AT ADEQUATE DEPTH TO PREVENT FREEZING.

INTERIOR WASTE AND VENT BELOW SLAB: WASTE AND VENT PIPE BELOW SLAB INSIDE BUILDING SHALL BE STANDARD WIEGHT CAST IRON SOIL PIPE WITH BELL AND SPIGOT FITTINGS WITH NEOPRENE GASKET JOINTS. HUBLESS WASTE AND VENT PIPE IS NOT PERMITTED BELOW BASE SLAB. SOLID WALL PVC DWV PIPE WITH SOCKET FITTINGS AND SOLVENT WELD JOINTS IS ALSO PERMITTED WHERE APPROVED BY CODE. PVC IN A PLENUM CAVITY SHALL BE FIRE WRAPPED OR ENCASED IN 5/8" GYPBOARD.

INTERIOR WASTE AND VENT ABOVE SLAB: WASTE AND VENT PIPE ABOVE SLAB INSIDE BUILDING SHALL BE HUBLESS CAST IRON SOIL PIPE AND FITTINGS WITH HUBLESS COUPLINGS. SOLID WALL PVC DWV PIPE WITH SOCKET FITTINGS AND SOLVENT WELD JOINTS IS ALSO PERMITTED WHERE APPROVED BY CODE. PVC IN A PLENUM CAVITY SHALL BE FIRE WRAPPED OR ENCASED IN 5/8" GYPBOARD.

INTERIOR STORM DRAIN: INSIDE BUILDING SHALL BE SAME AS SPECIFIED FOR INTERIOR WASTE AND VENT PIPE.

INDIRECT AND CONDENSATE DRAIN INSIDE BUILDING: INDIRECT AND CONDENSATE DRAIN PIPE INSTALLED INSIDE THE BUILDING SHALL BE TYPE "M" HARD COPPER WITH WROUGHT COPPER FITTINGS FOR 1" AND SMALLER AND "DWV" COPPER WITH WROUGHT COPPER DRAINAGE PATTERN FITTINGS FOR 1-1/4 " AND LARGER HARD TEMPER COPPER TUBE AND SOLDERED CONNECTIONS MADE WITH 95/5 SOLDER. INSTALL CLEANOUTS AT ELBOWS GREATER THAN 45 DEGREES.

GAS PIPING: GAS PIPING SHALL BE BLACK STEEL, STANDARD WEIGHT, SCHEDULE 40 ASTM A53. PIPING 2" AND SMALLER SHALL BE WELDED OR THREADED WITH MALLEABLE IRON FITTINGS. PIPING 2 1/2" AND LARGER SHALL BE WELDED WITH BUTT-WELDED FITTING. FITTINGS SHALL CONFORM TO ASME B16.3, MALLEABLE IRON OR ASTM A 234, FORGED STEEL WELDED TYPE.

AIR PIPING: COMPRESSED AIR PIPING SHALL BE TYPE "K" HARD COPPER PIPE IN ACCORDANCE WITH ASTM B 88 WITH WROUGHT COPPER FITTINGS (NIBCO OR APPROVED EQUIVALENT). FITTINGS SHALL BE FURNISHED IN ACCORDANCE WITH MSS SP-73 AND SHALL BE INSTALLED USING BRAZED JOINTS.

15C 1-2 PIPING AND EQUIPMENT INSULATION

DOMESTIC COLD WATER, HOT WATER, INDIRECT AND CONDENSATE DRAIN PIPE (WITHIN BUILDING): 1" THICK ONE-PIECE FIBERGLASS COVERING WITH FIRE-RESISTANT JACKET WITH SELF-SEALING LAP TO PROVIDE A CONTINUOUS VAPOR BARRIER BY CERTAINTEED, OWENS-CORNING OR ARMSTRONG. FOR PIPING AT HANGERS PROVIDE 8" LONG SECTIONS OF HIGH DENSITY, HIGH TEMPERATURE CALCIUM SILICATE BY JOHNS-MANVILLE, FIBERGLASS BY KNAUF, OR 8" LONG STYROFOAM BILLETS BY DOW. INSULATION SHALL BE CONTINUOUS ALONG THE PIPE SURFACE, EXCEPT AT VALVES, UNIONS, AND WHERE PIPING IS EXPOSED AT FIXTURES.

FOR HOT AND COLD WATER PIPING INSTALLED INSIDE MASONRY UNITS OF WALLS, PROVIDE ½" FLEXIBLE UNICELLULAR INSULATION BY ARMACELL.

FOR DOMESTIC COLD WATER, HOT WATER AND RECIRCULATED HOT WATER PIPE ROUTED IN CAR WASH SPACES, FURNISH WITH 30 MIL OVC JACKETING. PVC JACKETS SHALL BE INSTALLED WITH 1-INCH OVERLAP AT LONGITUDINAL SEALS AND END JOINTS. SEAL WITH MANUFACTURER'S RECOMMENDED ADHESIVE. APPLY TWO CONTINUOUS BEADS OF ADHESIVE TO SEAMS AND JOINTS, ONE BEAD UNDER LAP AND THE FINISH BEAD ALONG SEAM AND JOINT EDGE.

COVER FITTINGS WITH ZESTON, KNAUF, OR EQUAL ONE-PIECE PVC PREMOLDED INSULATING COVERS. FITTING COVERS, JACKETS AND ADHESIVES SHALL NOT EXCEED FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPMENT RATING OF 50 PER ASTM E84. AT ALL ELBOWS AND TEES, FILL VOIDS BETWEEN COVERS AND PIPING WITH FIBERGLASS INSULATION AND TAPE JOINTS. INSTALL PIPE INSULATION IN COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS. WHERE PREMOLDED INSULATING FITTINGS ARE NOT APPROVED BY LOCAL AUTHORITIES, MITER INSULATION AT FITTINGS.

15C 1-3 PIPING INSTALLATION

GENERAL: CLEAN PIPE THROUGHLY PRIOR TO INSTALLATION. REAM ENDS OF PIPE TO REMOVE BURRS. CUT PIPE ACCURATELY TO MEASUREMENTS TAKEN ON THE JOB. INSTALL WITH ADEQUATE CLEARANCE FOR INSTALLATION OF COVERINGS WHERE REQUIRED. PIPE SHALL NOT BE SPRUNG OR BENT. NEATLY ALIGN PIPE, CONNECT IT SECURELY, AND SUPPORT IT FROM THE BUILDING STRUCTURE WITH HANGERS AS SPECIFIED BELOW. PROVIDE CHROME-PLATED ESCUTCHEONS ON PIPES PASSING THROUGH CEILINGS, FLOORS OR WALLS OF FINISHED SPACES. RUN PIPES FREELY THROUGH FLOOR AND WALL PENETRATIONS USING PIPE SLEEVES. DO NOT GROUT IN PLACE UNLESS REQUIRED FOR STRUCTURAL FIRE INTEGRITY. INSTALL PIPE CONCEALED IN FINISHES SPACES WHEREVER POSSIBLE. USE A DIELECTRIC UNION WHERE FERROUS AND COPPER PIPE CONNECT. DIELECTRIC UNION SHALL HAVE A ZINC-PLATED STEEL BODY, A THREADED NYLON INSERT, AND INSULATING PRESSURE GASKET. NO FERROUS METAL-TO-COPPER CONNECTION MADE WITHOUT INSULATING UNIONS WILL BE ALLOWED.

HANGER & SUPPORTS: PIPE HANGERS SHALL BE AS DESCRIBED IN THE SPECIFICATIONS BY B-LINE OR EQUAL BY ANVIL, MICHIGAN, TRUSCON, OR UNISTRUT. CONNECT HANGERS TO THE STRUCTURE WITH SIDE BEAM CONNECTORS AND ALL THREAD HANGER RODS. PROVIDE ENGINEERED SUPPORT STRUTS BETWEEN JOISTS AND OTHER STRUCTURAL MEMBERS AS REQUIRED TO PROVIDE A RIGID HANGING INSTALLATION. DO NOT HANG PIPES FROM OTHER PIPES, CONDUIT OR DUCTWORK. PROVIDE HANGER RODS AND SPACE HANGERS AT INTERVALS AS REQUIRED.

SOIL, WASTE AND STORM: GRADE SOIL AND WASTE PIPING TO A UNIFORM SLOPE OF NOT LESS THAN 1/8" PER FOOT FOR PIPING 4" OR LARGER, AND NOT LESS THAN ¼" PER FOOT FOR PIPING 3" OR SMALLER. SLOPE STORM PIPING AT 1/8" PER FOOT. LAY PIPE AT UNIFORM SLOPE, FREE FROM SAGS, WITH HUB END UPSTREAM. SUPPORT PIPE AT EACH JOINT. MAKE CHANGES IN DIRECTION FROM HORIZONTAL TO VERTICAL AT FIXTURE BRANCHES AND OTHER BRANCH CONNECTIONS WITH SANITARY "TEES" OR SHORT SWEEP "ELLS". MAKE CHANGES IN DIRECTION FROM VERTICAL TO HORIZONTAL OR IN THE HORIZONTAL WITH LONG RADIUS FITTINGS, LONG SWEEPING "ELLS", COMBINATION "Y" FITTINGS, OR 45 DEGREE "ELLS" (1/8 BEND FITTINGS) AND "Y" FITTINGS.

DOMESTIC WATER: ARRANGE COLD, HOT AND HOT WATER RECIRCULATION PIPING TO DRAIN AT THE LOWEST POINT IN EACH SYSTEM. INSTALL AT LEAST ONE PIPE UNION ADJACENT TO ALL SHUTOFF VALVES, AT CONNECTION POINT OF EACH PIECE OF EQUIPMENT, AND ELSEWHERE IN THE SYSTEM WHERE REQUIRED TO ALLOW PROPER MAINTENANCE. PROVIDE UNIONS OF THE GROUND JOINT TYPE. MAKE ALLOWANCE FOR EXPANSION AND CONTRACTION WHERE REQUIRED BY THE INSTALLATION. WHERE WATER PIPING OCCURS IN EXTERIOR WALLS, HOLD PIPE AS CLOSE AS POSSIBLE TO THE INTERIOR FACE OF WALL AND INSTALL INSULATION BATT OR OTHER INSULATION (MINIMUM R8) BETWEEN PIPING AND THE EXTERIOR WALL FACE.

15C 1-4 EXTERIOR UTILITY CONNECTIONS

TERMINATE DOMESTIC WATER, STORM, AND SEWER LINES AT A POINT APPROXIMATELY FIVE FEET FROM THE BUILDING WALL, OR AS SHOWN ON THE DRAWINGS. MAKE CONNECTION TO THE VARIOUS SERVICES PROVIDED BY OTHERS AND COORDINATE CONNECTION REQUIREMENTS WITH CIVIL ENGINEER. VERIFY THAT INSTALLATION WILL TIE INTO THE VARIOUS SERVICES PROVIDED BY OTHERS AT THE INDICATED INVERT ELEVATION POINT PRIOR TO INSTALLATION. IF THE INSTALLATION WILL NOT TIE INTO THE INDICATED INVERT ELEVATION POINT WHILE MAINTAINING PROPER FALL, NOTIFY ARCHITECT AND CIVIL ENGINEER SO THAT AN ALTERNATIVE MAY BE DETERMINED.

PROVIDE SERVICE PIPING AND ACCESSORIES REQUIRED TO COMPLETE UTILITY CONNECTIONS THAT ARE NOT FURNISHED BY THE SERVING UTILITY.

15C 1-5 SYSTEM TESTING AND ADJUSTING

UPON COMPLETION OF EACH PHASE OF THE INSTALLATION, TEST EACH SYSTEM IN CONFORMANCE WITH LOCAL CODE REQUIREMENTS AND AS NOTED BELOW. FURNISH LABOR AND EQUIPMENT REQUIRED TO TEST PLUMBING WORK INSTALLED UNDER THIS CONTRACT, AND ASSUME COSTS INVOLVED IN MAKING THE TESTS, AND REPAIRING AND/OR REPLACING DAMAGE RESULTING THEREFROM.

NOTIFY THE ARCHITECT AND THE AUTHORITY HAVING JURISDICTION, THREE (3) WORKING DAYS PRIOR TO MAKING PLUMBING SYSTEM TESTS. LEAVE CONCEALED WORK UNCOVERED UNTIL THE REQUIRED TESTS HAVE BEEN COMPLETED, BUT IF NECESSARY DUE TO CONSTRUCTION PROCEDURE, TESTS ON PORTIONS OF THE WORK MAY BE MADE, AND WHEN SATISFACTORY, THE WORK MAY BE CONCEALED. TEST PIPING BEFORE INSULATION IS INSTALLED, AND BEFORE BACKFILL. PIPES, JOINTS, FLANGES, VALVE STEMS, ETC., SHALL BE LEAK TIGHT. REPAIR OR REPLACE SYSTEM DEFECTS WITH NEW MATERIALS. CAULKING OF DEFECTIVE JOINTS, CRACKS OR HOLES WILL NOT BE PERMITTED. REPEAT TESTS AFTER DEFECTS HAVE BEEN ELIMITATED. MAKE TESTS IN THE PRESENCE OF THE ADMINISTRATIVE AUTHORITY AND/OR THE OWNER'S AUTHORIZED REPRESENTATIVE.

15C 1-6 GUARANTEE

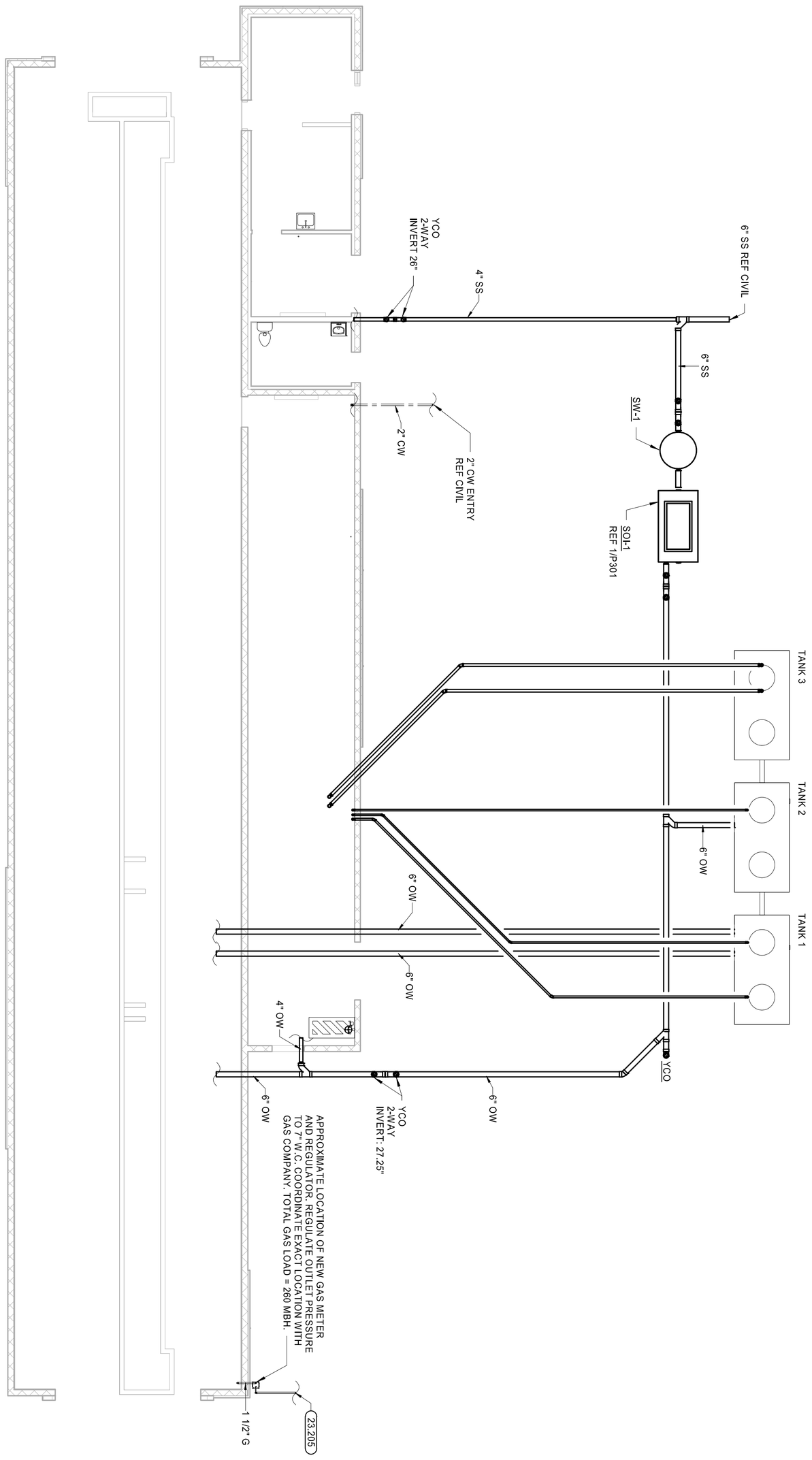
THE WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL INCLUDE THE FURNISHING, INSTALLATION, AND CONNECTION OF PLUMBING SYSTEMS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. BY SIGNING THE CONTRACT, THE CONTRACTOR ACKNOWLEDGES THAT HE HAS ACQUAINTED HIMSELF WITH THE SITE AND THE EXISTING CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, AND THE DRAWINGS AND SPECIFICATIONS PERTAINING THERETO, AND HE INDICATES THAT HE WILL COMPLY WITH THE REQUIREMENTS AND INTENT OF PERTINENT DOCUMENTS IN THE PERFORMANCE OF THE WORK.

GUARANTEE THAT THE PLUMBING INSTALLED UNDER THIS CONTRACT IS FREE OF DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF JOB ACCEPTANCE BY THE OWNER. THIS SHALL INCLUDE A GUARANTEE OF FREE CIRCULATION OF LIQUIDS THROUGHOUT THE SYSTEM AS INTENDED WITHOUT LEAKS, EXCESSIVE NOISE, OR WATER HAMMER.

IF DEFECTS OCCUR DURING THE ONE YEAR GUARANTEE PERIOD, REPAIR OR REPLACE SUCH DEFECTS AT NO EXPENSE TO THE OWNER, AND TO THE SATISFACTION OF THE OWNER, ARCHITECT AND ENGINEER.

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-P100-PLUMBING SITE PLAN



1 PLUMBING SITE PLAN
1/8" = 1'-0"

KEYNOTES	
23.205	TO GAS COMPANY MAIN. COORDINATE EXACT ROUTING WITH GAS COMPANY.

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK	
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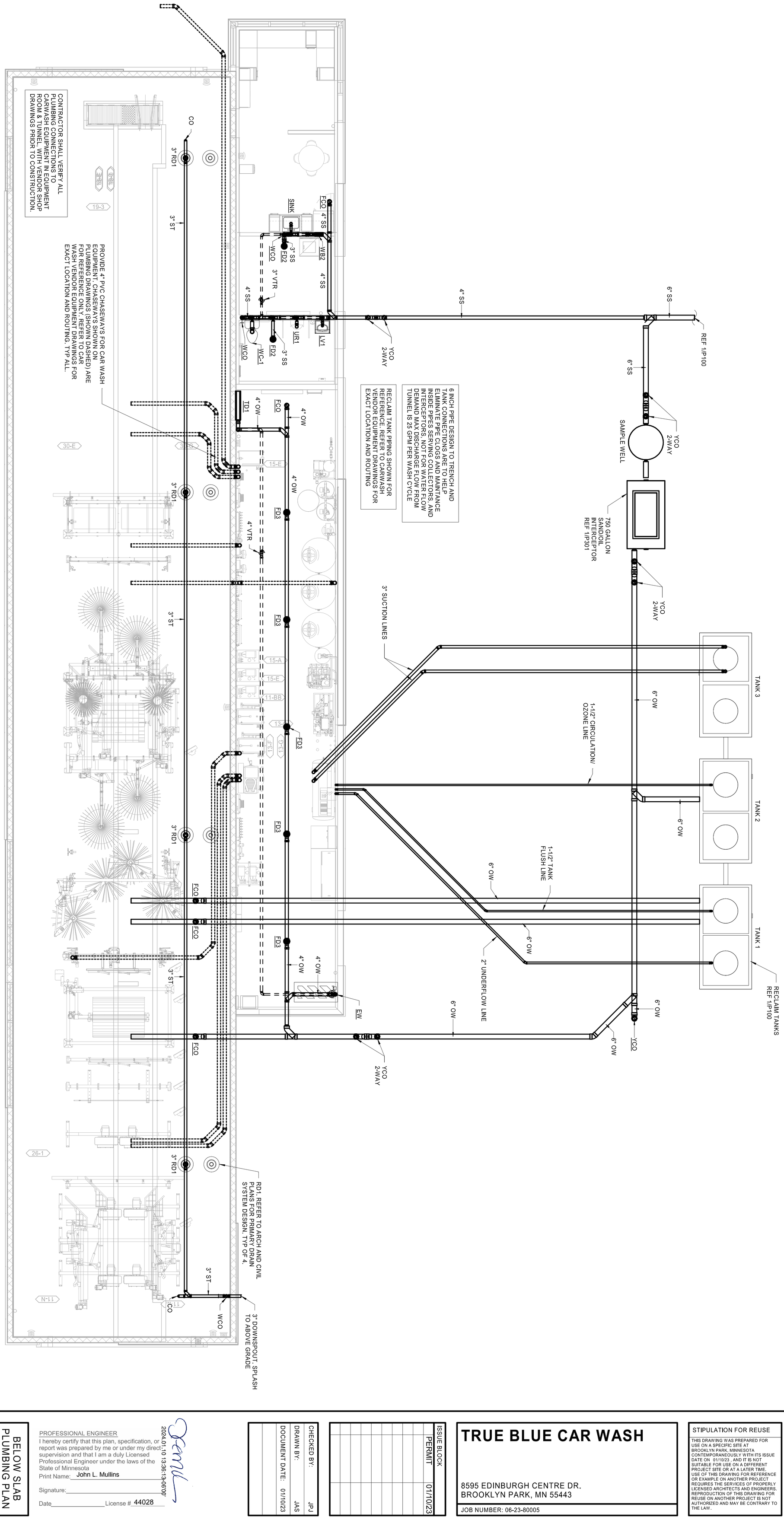
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Print Name: John L. Mullins
Signature:
Date License # 44028
2024.01.10 13:35:39-06'00'

PLUMBING SITE PLAN

SHEET: P100

1/10/2024 11:43:41 AM
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-P101-BELOW SLAB PLUMBING PLAN



1 BELOW SLAB PLUMBING PLAN
3/16" = 1'-0"

SHEET: P101

BELOW SLAB PLUMBING PLAN

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TRUE BLUE CAR WASH

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BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

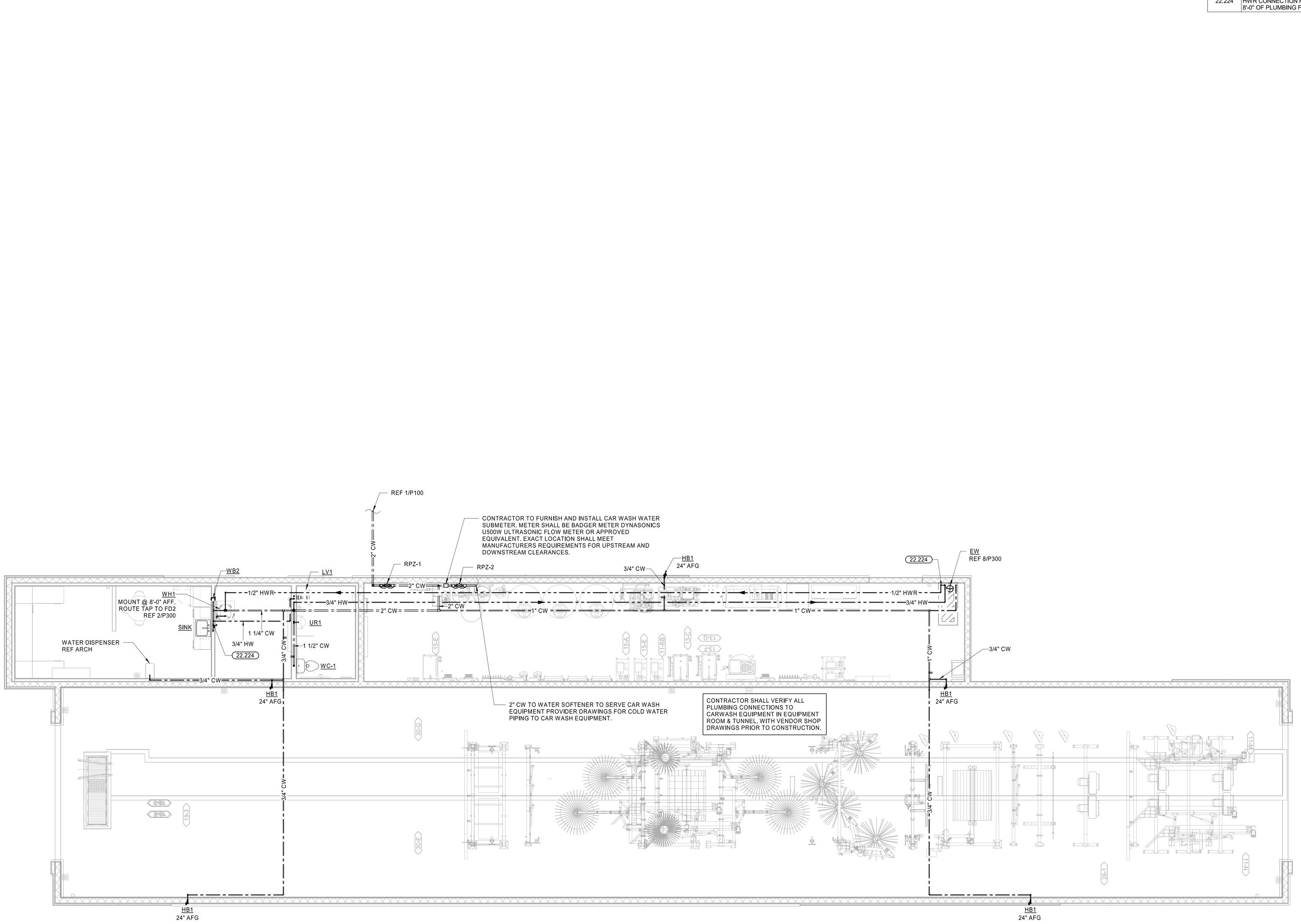
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5.2D - PLAN SET

KEYNOTES	
22.224	HWR CONNECTION MUST BE WITHIN 8'-0" OF PLUMBING FIXTURE.



1 WATER PLAN

3/16" = 1'-0"

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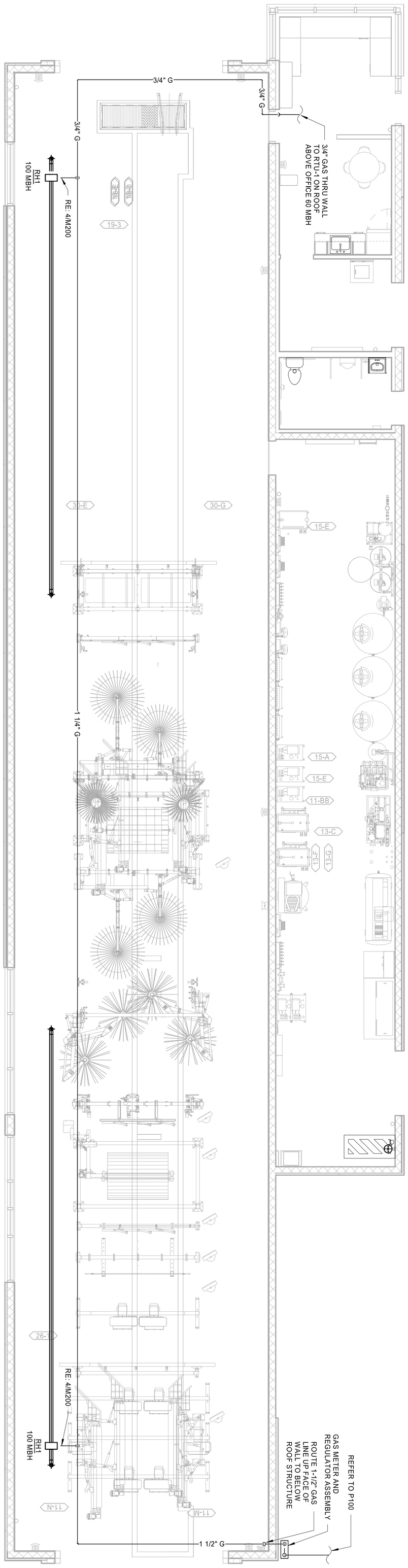
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WATER PLAN

SHEET:
P200

1/10/2024 11:43:45 AM
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P200- WATER PLAN

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-P201-GAS PLAN



1 GAS PLAN
3/16" = 1'-0"

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2024.01.10 13:37:07-06'00'

GAS PLAN

SHEET: P201

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TRUE BLUE CAR WASH

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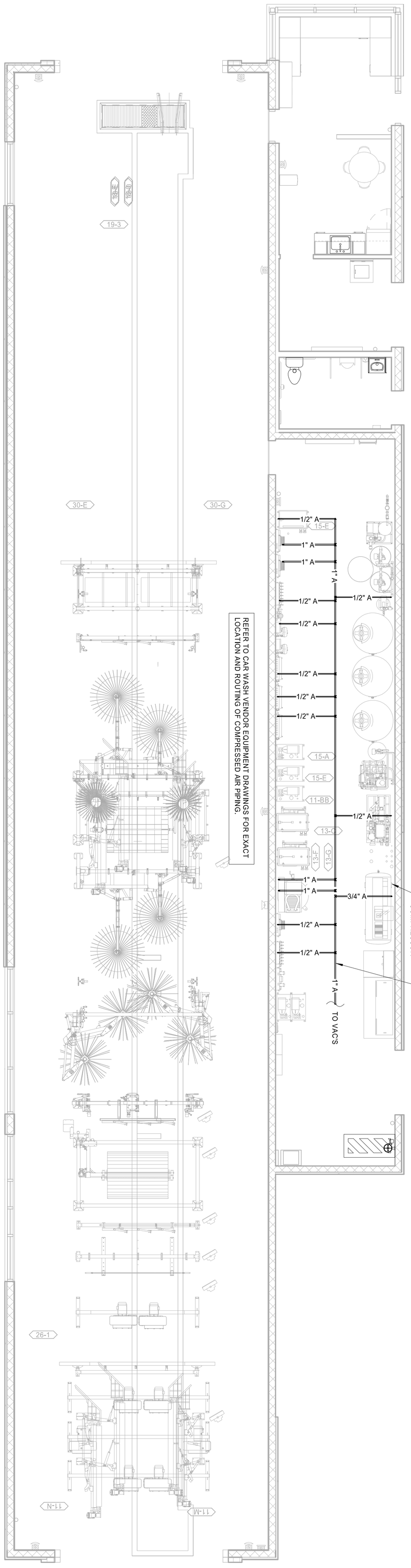
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-P202-COMPRESSED AIR PLAN



1 COMPRESSED AIR PLAN
3/16" = 1'-0"

SHEET: P202

COMPRESSED AIR PLAN

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TRUE BLUE CAR WASH

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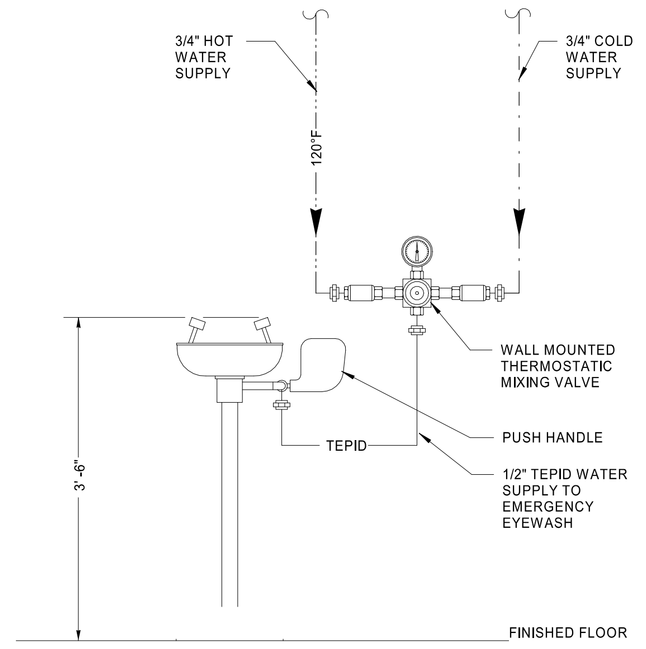
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STIPULATION FOR REUSE

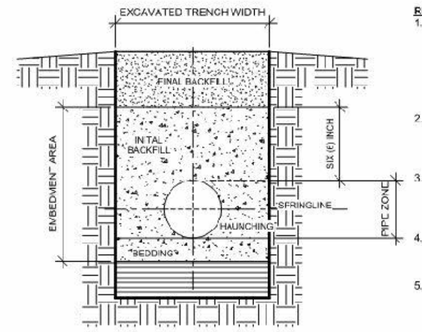
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5.2D - PLAN SET



8 EMERGENCY EYEWASH
N.T.S.

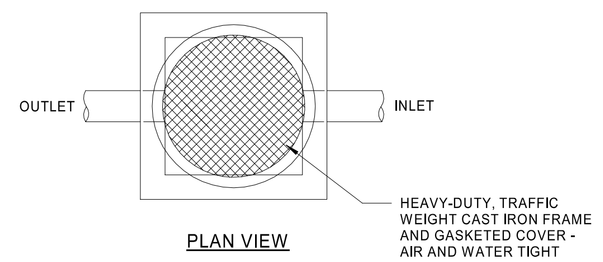


UNDERGROUND INSTALLATION OF PLASTIC PIPE
PLASTIC PIPE SHOULD ALWAYS BE BURIED IN STRICT ACCORDANCE WITH THE ASTM STANDARD RELEVANT TO THE TYPE OF PLASTIC PIPING SYSTEM BEING INSTALLED. THOSE STANDARD ARE:
ASTM D2321 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS.
ASTM D2774 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING.

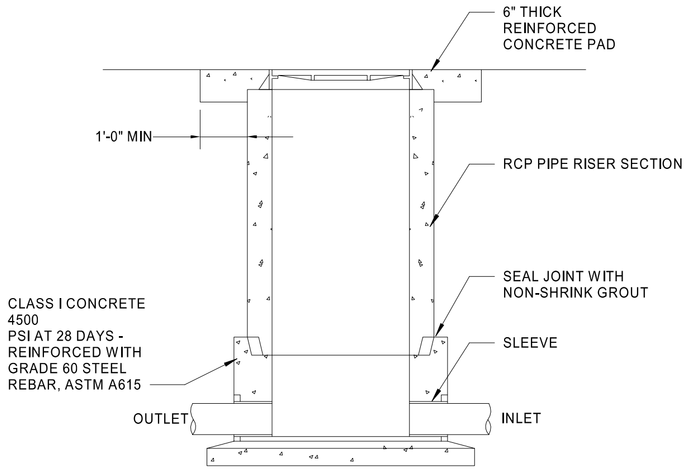
NOTE: IN ADDITION TO THESE STANDARDS, PIPE SHOULD ALWAYS BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODE REQUIREMENTS.

RECOMMENDATION FOR UNGROUND INSTALLATION OF PLASTIC DRAINAGE PIPE
1. THE MINIMUM WIDTH OF THE TRENCH SHOULD BE THE PIPE OD (OUTSIDE DIAMETER) PLUS 16 INCHES OR THE PIPE OUTSIDE DIAMETER TIMES 1.25 PLUS 12 INCHES. THIS WILL ALLOW ADEQUATE ROOM FOR JOINING THE PIPE, DRAWING THE PIPE IN THE TRENCH TO ALLOW FOR EXPANSION AND CONTRACTION WHERE APPROPRIATE AND SPACE FOR BACKFILLING AND COMPACTION OF BACKFILL. THE SPACE BETWEEN THE PIPE AND TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED TO COMPACT BACKFILL.
2. PROVIDE A MINIMUM OF 4 INCHES OF FIRM, STABLE AND UNIFORM BEDDING MATERIAL IN THE TRENCH BOTTOM. IF ROCK OR UNYIELDING MATERIAL IS ENCOUNTERED, A MINIMUM OF 6 INCHES OF BEDDING SHALL BE USED. BLOCKING SHOULD NOT BE USED TO CHANGE PIPE GRADE OR TO INTERMITTENTLY SUPPORT PIPE OVER LOW SECTIONS IN THE TRENCH.
3. THE PIPE SHOULD BE SURROUNDED WITH AN AGGREGATE MATERIAL WHICH CAN BE EASILY WORKED AROUND THE SIDES OF THE PIPE. BACKFILLING SHOULD BE PERFORMED IN LAYERS OF 6 INCHES WITH EACH LAYER BEING SUFFICIENTLY COMPACTED TO 85% TO 95% COMPACTION.
4. A MECHANICAL TAMPER IS RECOMMENDED FOR COMPACTING SAND AND GRAVEL. THESE MATERIALS CONTAIN FINE-GRAINS, SUCH AS SILT AND CLAY. IF A TAMPER IS NOT AVAILABLE, COMPACTING SHOULD BE DONE BY HAND.
5. THE TRENCH SHOULD BE COMPLETELY FILLED. THE BACKFILL SHOULD BE PLACED AND SPREAD IN UNIFORM LAYERS TO PREVENT ANY UNFILLED SPACES OR VOIDS. LARGE ROCKS, STONES, FROZEN CLODS OR OTHER LARGE DEBRIS SHOULD BE REMOVED. STONE BACKFILL SHALL PASS THROUGH AN 1-1/2" SIEVE. ROCK SIZE SHOULD BE ABOUT ONE-TENTH OF THE PIPE OUTSIDE DIAMETER. HEAVY TAMPERS OR ROLLING EQUIPMENT SHOULD ONLY BE USED TO CONSOLIDATE THE FINAL BACKFILL.
6. TO PREVENT DAMAGE TO THE PIPE AND DISTURBANCE TO PIPE EMBEDMENT, A MINIMUM DEPTH OF BACKFILL ABOVE THE PIPE SHOULD BE MAINTAINED. PIPE SHOULD ALWAYS BE INSTALLED BELOW THE FROST LEVEL. TYPICALLY, IT IS NOT ADVISABLE TO ALLOW VEHICULAR TRAFFIC OR HEAVY CONSTRUCTION EQUIPMENT TO TRAVERSE THE PIPE TRENCH.

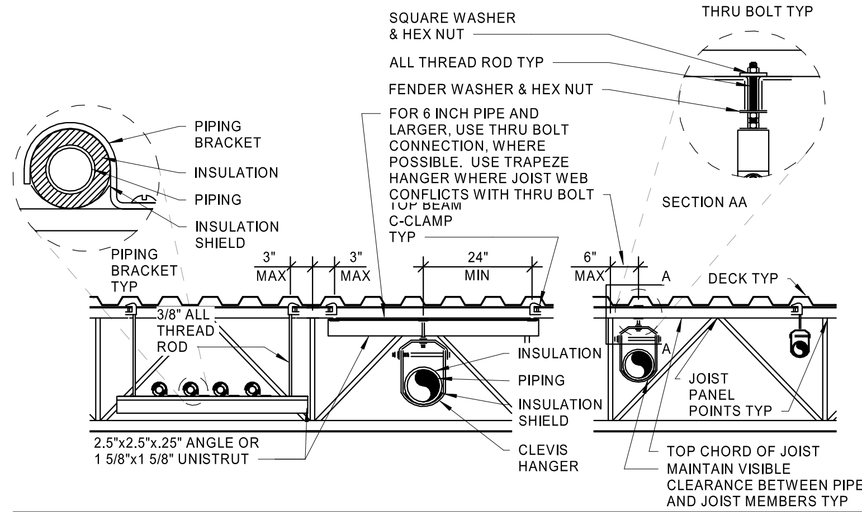
7 UNDERGROUND INSTALLATION OF PLASTIC PIPE
N.T.S.



PLAN VIEW

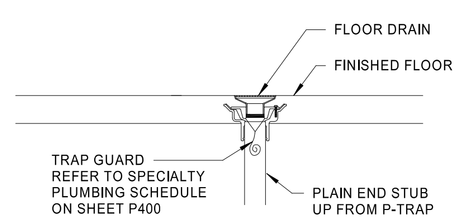


ELEVATION

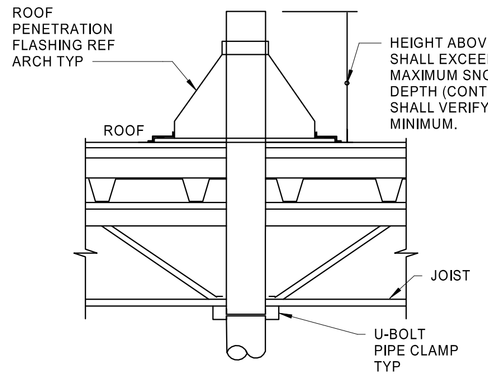


NOTE:
1. UTILIZE FOR ALL PIPING EXCEPT SPRINKLER, ROOF DRAIN, AND REFRIGERATION PIPING.
2. SPACE HANGERS AND SUPPORTS IN ACCORDANCE WITH SPECIFICATIONS.
3. LOCATE HANGERS WITHIN 3 INCHES OF JOIST PANEL POINTS U.N.O.
4. DO NOT SUPPORT PIPING FROM BOTTOM CHORD OF BAR JOISTS.
5. INDIVIDUAL PIPES 3 INCH AND SMALLER NOT REQUIRED TO BE WITHIN 3 INCHES OF PANEL POINT.
6. FOR PIPE RUNNING PARALLEL TO JOISTS, ATTACH TRAPEZE BEAM CLAMPS TO JOISTS ON EACH SIDE OF PIPE TYP.
7. TRAPEZE HANGERS AND ALL THREAD RODS ARE SIZED TO CARRY (MAX) 6 - 3 INCH DIAMETER COPPER PIPES FULL OF WATER (37.62 LBS/FT) OR EQUIVALENT. IF LOAD EXCEEDS MAXIMUM, CONTACT THE EOR FOR PROPER SIZING

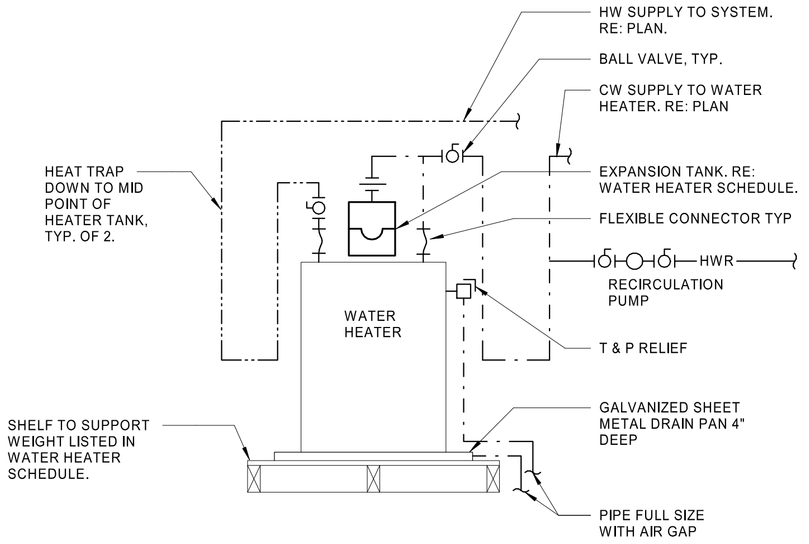
3 PIPE SUPPORT DETAIL
NTS



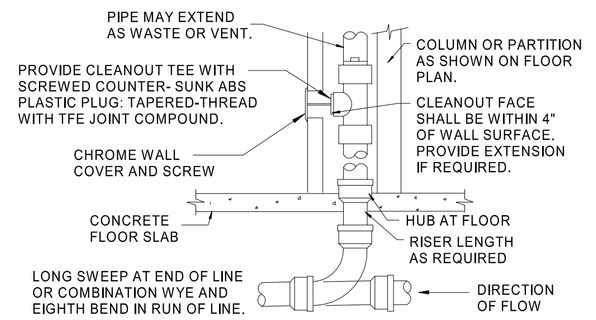
6 TRAP GUARD
NTS



5 VENT THRU ROOF (VTR)
NTS

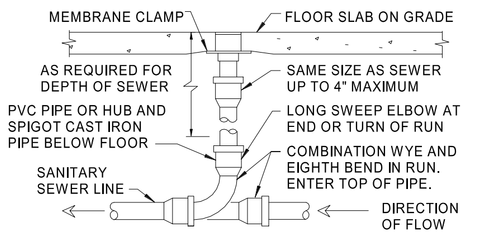


2 WATER HEATER
N.T.S.



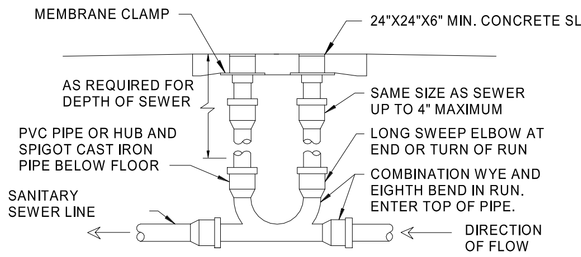
WALL CLEANOUT

PROVIDE WCO WHERE SHOWN ON PLAN, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT: LOCATE ABOVE FIXTURE FLOOD RIM WITHIN 4' OF FLOOR. CONSULT CODE FOR OTHER WCO REQUIREMENTS.

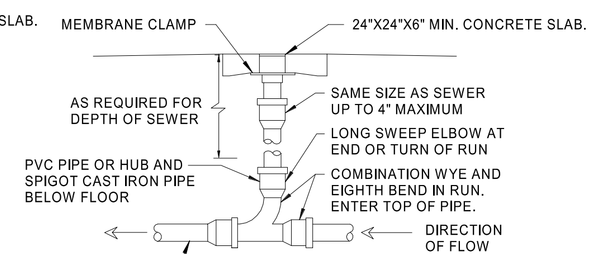


FLOOR CLEANOUT

LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT 50' INTERVALS ON STRAIGHT RUNS, AND/OR WHERE SHOWN ON PLANS. PROVIDE BACKFILL PER ARCHITECTURAL SPECIFICATIONS. LOCATE CLEANOUTS WHERE THERE IS 18" CLEAR AROUND. CONSULT CODE FOR OTHER FCO REQUIREMENTS.



2-WAY GRADE CLEANOUT



GRADE CLEANOUT

ROUND SECURED GASKETED NICKEL BRONZE ADJUSTABLE TOP WITH "CO" CAST IN COVER. PROVIDE CLEANOUT TOP WITH VARIATIONS SUITABLE FOR FLOOR COVERING (CARPET MARKER, RECESSED FOR TILE, SCORIATED FOR UNFINISHED FLOORS). PROVIDE GASKETED PLASTIC PLUG IN CAST IRON BODY. USE TEFLON JOINT COMPOUND ON PLUG THREADS. CLEAN THE TOP OF EXPOSED FCO AFTER INSTALLATION.

4 SAMPLE WELL DETAIL
NTS

1 CLEAN OUT DETAILS
N.T.S.

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/23

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DRAWN BY:	JAS
DOCUMENT DATE:	01/10/23

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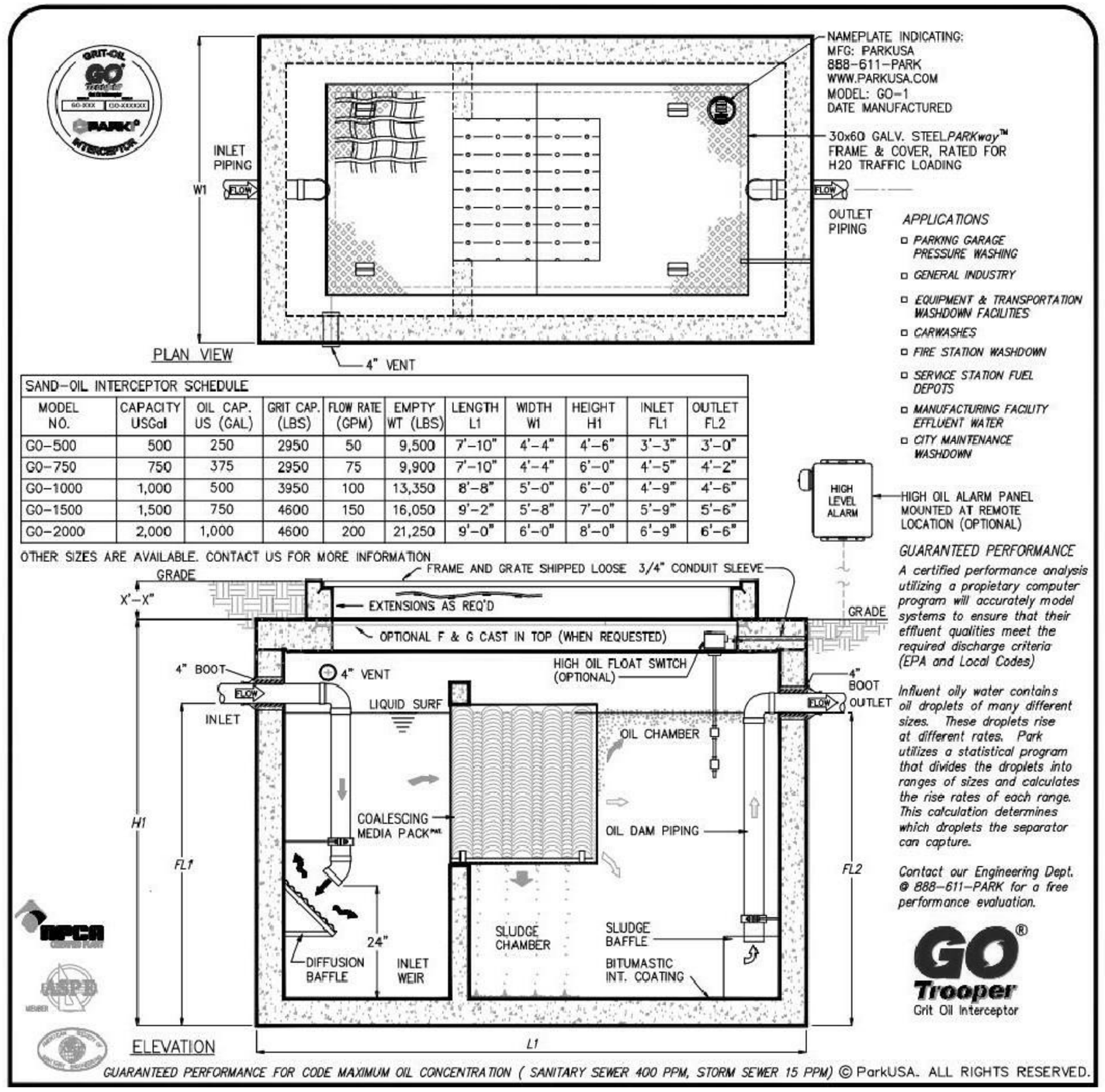
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Signature:
Date:

PLUMBING DETAILS

SHEET: P300

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P300-PLUMBING DETAILS

5.2D - PLAN SET



SAND-OIL INTERCEPTOR SCHEDULE

MODEL NO.	CAPACITY USGal	OIL CAP. US (GAL)	GRIT CAP. (LBS)	FLOW RATE (GPM)	EMPTY WT (LBS)	LENGTH L1	WIDTH W1	HEIGHT H1	INLET FL1	OUTLET FL2
GO-500	500	250	2950	50	9,500	7'-10"	4'-4"	4'-6"	3'-3"	3'-0"
GO-750	750	375	2950	75	9,900	7'-10"	4'-4"	6'-0"	4'-5"	4'-2"
GO-1000	1,000	500	3950	100	13,350	8'-8"	5'-0"	6'-0"	4'-9"	4'-6"
GO-1500	1,500	750	4600	150	16,050	9'-2"	5'-8"	7'-0"	5'-9"	5'-6"
GO-2000	2,000	1,000	4600	200	21,250	9'-0"	6'-0"	8'-0"	6'-9"	6'-6"

OTHER SIZES ARE AVAILABLE. CONTACT US FOR MORE INFORMATION

1 SAND/OIL SEPARATOR DETAIL
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TRUE BLUE CAR WASH

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ISSUE BLOCK

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PLUMBING DETAILS

SHEET:
P301

1/10/2024 1:43:03 PM
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JP301-PLUMBING DETAILS

5.2D - PLAN SET

PLUMBING SYMBOLS

SS	SANITARY SEWER		PLUMBING VENT		TEE - TURNED UP		BALANCING VALVE
OW	OIL WASTE	CD	CONDENSATE DRAIN		BALL VALVE	2-WAY	2-WAY YARD CLEANOUT
	COLD WATER	ST	STORM SEWER		BACKFLOW PREVENTER	FCO	FLOOR CLEANOUT
	HOT WATER		ELBOW - TURNED DOWN	FD1	FLOOR DRAIN	YCO	YARD CLEANOUT
	HOT WATER RETURN		ELBOW - TURNED UP	HB	HOSE BIBB	WCO	WALL CLEANOUT
G	NATURAL GAS		TEE - TURNED DOWN	ETR	EXISTING TO REMAIN		CONNECT TO EXISTING

PLUMBING NOTES

1. PROVIDE ALL MATERIALS FOR A COMPLETE INSTALLATION IN ALL RESPECTS READY FOR INTENDED USE AND IN STRICT ACCORDANCE WITH STATE AND LOCAL CODES AND MANUFACTURER'S RECOMMENDATIONS.
2. REFER TO RISER DIAGRAMS AND PLUMBING FIXTURE SCHEDULE FOR ALL PIPING AND PIPE SIZES NOT SHOWN ON PLAN.
3. MAINTAIN MINIMUM SLOPE OF 1/8" PER FOOT FOR SANITARY SEWER PIPING 3" OR LARGER. MAINTAIN MINIMUM SLOPE OF 1/4" PER FOOT FOR SANITARY SEWER PIPING SMALLER THAN 3".
4. PROVIDE ACCESS DOORS TO ALL CONCEALED VALVES AND CLEAN-OUTS; IF NOT ABOVE AN ACCESSIBLE CEILING.
5. PROVIDE TRAP SEALS OR PRIMERS AS SHOWN OR AS REQUIRED BY AHJ. CONTRACTOR SHALL VERIFY REQUIREMENTS.
6. INSTALL VTR'S, EXHAUST FANS, AND FLUES A MINIMUM 5'-0" FROM PARAPET OR OUTSIDE WALL AND 10'-0" MINIMUM FROM EQUIPMENT WITH OUTSIDE AIR INTAKE.
7. INSTALL WATER PIPE ON INSIDE OF EXTERIOR WALL INSULATION TO PREVENT FREEZING.
8. DOMESTIC WATER PIPING WITHIN BUILDING SHALL BE ABOVE GROUND. PIPING THRU FLOORS SHALL BE ISOLATED FROM CONTACT WITH CONCRETE.
9. WATER PIPING AND SIMILAR ITEMS THAT RUN THROUGH STUD SPACES SHALL HAVE A MINIMUM OF 1.2" CLEAR SPACE SURROUNDING THE PIPING TO AVOID CONTACT WITH ADJACENT SURFACES.
10. VENTS LOCATED BELOW SLAB SHALL BE 2" DIAMETER MINIMUM.
11. ALL SEWER PIPING BELOW SLAB TO BE 2" DIAMETER MINIMUM.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	MANUFACTURER	MODEL	BRANCH SIZES (MIN) CW	HW	WASTE	VENT	DESCRIPTION, TRIM AND ACCESSORIES
HB1	HOSE BIB	ZURN INDUSTRIES	Z1341	3/4"				RECESSED WALL HYDRANT W/EXTERNAL VACUUM BREAKER
LAV1	LAVATORY	KOHLER	K-2005	1/2"	1/2"	2"	1 1/2"	FAUCET: SPEAKMAN SC-3084 CENTERSET FAUCET, GRID STRAINER WITH TAILPIECE, P-TRAP WITH CLEANOUT, STOP VALVES, SS BRAIDED WATER SUPPLIES AND ESCUTCHEONS. PROVIDE THERMOSTATIC MIXING VALVE, ASSE 1070 ZURN ZW3870XLT SET TO 105°F. CARRIER: JOSAM 17100 (WALL MOUNT). LAVATORY ENCLOSURE: TRUEBRO LAV-SHIELD 2018.
SINK	SINK (HANDICAP)	ELKAY	LRAD1517	1/2"	1/2"	2"	2"	SELF-RIMMING SINK COMPARTMENT, 3 HOLES ON 4" CENTERS OVERALL SIZE 15"L x 17½"W x 6"D, TYPE 304 18 GAUGE STAINLESS STEEL, BACKLEDGE, SATIN FINISH RIM AND BOWL, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE. CRUMB CUP STRAINER, DELTA FAUCET #100LF-HDF (1.0 GPM AERATOR #060940A). ELKAY STRAINER #LK35, McGUIRE STOPS AND P-TRAP
SS1	MOP SINK	STERN-WILLIAMS	SB-800	3/4"	3/4"	3"	2"	CHROME PLATED FAUCET WITH INTERGRAL CHECK VALVES, HOSE, BRACKET AND MOP HANGER. FAUCET: CHICAGO 897-CP (DISCARD STANDARD SUPPLY ARMS AND CONNECT (2) GCJKCP SUPPLY ARMS USING (2) 807-020JKRCF ADAPTERS), ZURN Z843M1-CS, T&S BRASS B-0665-BSTP WITH ETERNAL CARTRIDGES AND SPRING CHECKS. MOP HANGER: STERN WILLIAMS T-40, FIAT 889-CC, ACORN KMH.
UR1	URINAL	AMERICAN STANDARD	WASHBROOK 6590	3/4"		3"	1 1/2"	URINAL - ADA
WB2	WASHING MACHINE OUTLET BOX	OATEY	38554	1/2"	1/2"	3"	2"	WASHING MACHINE OUTLET BOX, 1/4 TURN VALVE, COPPER CONNECTIONS. PROVIDE MINIMUM 18" STANDPIPE DEPTH ON DRAIN PER IPC SECTION 802.3.3
WC1	WATER CLOSET ADA	AMERICAN STANDARD	CHAMPION 211AA.104	1/2"		4"	2"	FLOOR MOUNTED HIGH EFFICIENCY (1.28GPF) ADA COMPLIANT TANK TOILET, VITREOUS CHINA, ELONGATED BOWL, TRIP LEVER SHALL BE LOCATED ON SIDE TOILET STALL, SEAT: CHURCH #9500C, WHITEM OPEN FRONT SELF-SUSTAINING SEAT, CHICAGO FAUCET #995-CP ANGLE STOP FITTING WITH 293-6 LOOSE KEY HANDLE.

PLUMBING FIXTURE SCHEDULE NOTES

NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING AND OTHER REQUIREMENTS FOR ALL TAS/ADA FIXTURES.
2. INSULATE PIPING BELOW FIXTURES PER TAS/ADA REQUIEMENTS.
3. REFER TO TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF TOILETS FIXTURES.
4. ALL RESTROOM FIXTURES ARE TO BE WHITE.
5. PROVIDE THERMOSTATIC MIXING VALVE AT ALL SINKS AND LAVATORIES. SET LAVATORIES TO 105ºF AND SINKS TO 120ºF.
6. EQUAL ALTERNATIVES ALLOWED. ALTERNATIVES MUST MEET SAME PERFORMANCE AND WARRANTY SPECS.

WATER DISTRIBUTION - FRESH & STANDARD RECLAIM

EQUIPMENT NO.	EQUIPMENT/APPLICATION	WATER TYPE	USE FACTOR	WATER FLOW (GPM)	GATE TIME (SEC)	USE FACTOR AVERAGED GALLONS/CAR: FRESH/SOFT WATER	POLISHED WATER	RECLAIM WATER	RO WATER	RO REJECT
1	PREP GUN	FRESH	100%	4	8	0.53	-	-	-	-
2	PRESOAK #1	FRESH	100%	4	14	0.93	-	-	-	-
3	CTA #1	FRESH	100%	2	2	0.07	-	-	-	-
4	SCENT APPLICATION #1	FRESH	100%	0.5	2	0.02	-	-	-	-
5	PRESOAK #1 - K-STICK SIDE NOZZLE	FRESH	100%	4	14	0.93	-	-	-	-
6	1ST FOAMER APPLICATION - TUBE FOAMER	FRESH	100%	4	14	0.93	-	-	-	-
7	FUSTION BATH APPLICATION	FRESH	100%	4	14	0.93	-	-	-	-
8	TIRE BRUSH - COBRA BRUSH	RECLAIM	100%	6	14	-	-	1.40	-	-
9	CTA #2	FRESH	100%	2	2	0.07	-	-	-	-
10	21" BOTTOM MOUNT SIDE WASHER #1	RECLAIM	100%	6	5	-	-	0.50	-	-
11	ENT WRAP AROUND #1 - WATER	RECLAIM	100%	6	14	-	-	1.40	-	-
12	DCW TOP BRUSH	FRESH	100%	5	5	0.42	-	-	-	-
13	EXIT WRAP AROUND #2 - WATER	RECLAIM	100%	6	14	-	-	1.40	-	-
14	GRILL BRUSH 50"	RECLAIM	100%	6	14	-	-	1.40	-	-
15	GRILL BRUSH LUBRICATION	FRESH	100%	4	14	0.93	-	-	-	-
16	TRIPLE FOAM (3 BANANA FOAMERS)	FRESH	100%	0.5	14	0.12	-	-	-	-
17	OMNI HP - SIDES	RECLAIM	100%	20	18	-	-	6.00	-	-
18	OMNI HP - TOP	REJECT	100%	20	18	-	-	-	-	6.00
19	UNDERCARRIAGE #1	RECLAIM	100%	10	18	-	-	3.00	-	-
20	TOP BRUSH	FRESH	100%	5	5	0.42	-	-	-	-
21	FUSION WAX	FRESH	100%	6	14	1.40	-	-	-	-
22	CLEAR COAT	FRESH	100%	6	14	1.40	-	-	-	-
23	CERAMIC 1	FRESH	100%	6	14	1.40	-	-	-	-
24	FINAL RINSE - RAIN BAR 4GPM	FRESH	100%	4	14	0.93	-	-	-	-
25	DRYING AGENT-	FRESH	100%	2	14	0.47	-	-	-	-
26	FINAL RINSE - RAIN BAR 4GPM	FRESH	100%	4	14.00	0.93	-	-	-	-
27	MIRROR RINSE	RO	100%	4	14.00	-	-	-	0.93	-
28	SPOT FREE RINSE	RO	100%	4	14.00	-	-	-	0.93	-
	TOTAL (GALLONS)					12.83	0.00	15.10	1.87	6.00

SPECIALTY PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	MANUFACTURER	MODEL	WASTE	VENT	DESCRIPTION	NOTES
SOI-1	SAND/OIL INTERCEPTOR	PARK USA	GO-750	6"	---	GRAVITY CONCRETE GREASE INTERCEPTOR WITH TRAFFIC DUTY MANHOLE COVERS. PROVIDE CONCRETE EXTENSIONS AS REQUIRED FOR MAN HOLES.	
SW-1	SAMPLE WELL	PARK USA	SWB	6"	---	CONSTANT FLOW LINE SAMPLE WELL, MONOLITHIC CONCRETE CONSTRUCTED FIRST STAGE WITH RPC RISERS AS NEEDED, TRAFFIC DUTY MANHOLE RING COVER.	
P-1	CIRCULATION PUMP	BELL AND GOSSETT	PL-30	---	---	IN-LINE CIRCULATION PUMP (1/12 HP) WITH TIMER KIT (#TC-1), AQUA-STAT (#AQS-3/4) AND POWER CORD. V/PH = (120V/1PH)	
EW	EMERGENCY EYEWASH	SPEAKMAN	SE-580	1-1/2"	1-1/4"	WALL MOUNTED, GALVANIZED STEEL PIPE, CHROME PLATE BRASS VALVE, YELLOW PLASTIC BOWL WITH DUST COVER, 304 SS HANDLE, PROVIDE P-TRAP AND TAILPIECE WHERE APPLICABLE ON PLANS. PROVIDE EMERGENCY MIXING VALVE SET TO 70 DEG F.	
RPZ-2	REDUCED PRESSURE BACKFLOW PREVENTER	WATTS	LF009-QT	---	---	2" REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY BRONZE BODY, WITH SHUT-OFF VALVES, Y STRAINER, AND TEST COCKS. FINAL LOCATION PER AHJ REQUIREMENT.	
TD1	TRENCH DRAIN	JAY R. SMITH	9930	4"	2"	LIGHTWEIGHT POLYPROPYLENE WITH CHEMICAL RESISTANCE. PROVIDE SLOTTED STAINLESS STEEL GRATE: JAY R. SMITH 9870-455-SSHD. REFER TO PLANS FOR WIDTH.	
RD1	ROOF DRAIN	JAY R. SMITH	1010-C-R	2"	---	ROOF DRAIN WITH ONE CI DOME, NO HUB, CAST IRON DOMES, FLASH CLAMPS, GRAVE STOPS.	
TMV-1	THERMOSTATIC MIXING VALVE	POWER	LFE480-00	---	---	LAVATORY TEMPERING VALVE FOR LOW FLOW (0.5GPM) CONTROL, ROUGH BRONZE FINISH.	
FCO	FLOOR CLEAN OUT	JAY R. SMITH	4033L-NB	---	---	ADJUSTABLE FLOOR CLEANOUT, ROUND, ADJUSTABLE NICKLE BRONZE TOP	
YCO	YARD CLEANOUT	JAY R. SMITH	4233L-NB	---	---	ADJUSTABLE HEAVY DUTY CLEANOUT WITH, ROUND CAST IRON TOP - TRACTOR COVER AND VANDAL PROOF CENTER SECURING SCREW, HEAVY TRAFFIC LOAD.	1
WHA	WATER HAMMER ARRESTOR	MIFAB	MWH	---	---	CONFORM TO PDI WH-201, ASSE 1010; TEMP TO 250 DEGREES F, MAX 350 PSIG WORKING PRESSURE	2
RPZ-1	REDUCED PRESSURE BACKFLOW PREVENTER	WATTS	LF009-QT	---	---	2" REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY BRONZE BODY, WITH SHUT-OFF VALVES, Y STRAINER, AND TEST COCKS. FINAL LOCATION PER AHJ REQUIREMENT.	
-	BALANCING VALVES	BELL & GOSSETT	---	---	---	ALL BALANCING VALVES SHALL BE BELL & GOSSETT CIRCUIT SETTERS OR EQUAL	
-	WATER PRESSURE REGULATOR	WILKINS	500	---	---	BRONZE BODY WITH SHUT-OFF VALVES	
-	BALL VALVES	WILKINS	850	---	---	FULL PORT BRASS BALL VALVE WITH LEVER HANDLE	
FD1	FLOOR DRAIN (STORAGE)	JAY R. SMITH	2005A-04-05-NB	4"	2"	DUCO CAST IRON BODY FLOOR DRAIN WITH FLASHING COLLAR AND 5" NICKEL BRONZE ROUND ADJUSTABLE STRAINER HEAD. PROVIDE SURE SEAL TRAP GUARD #SS4009	
FD2	FLOOR DRAIN (RESTROOM)	JAY R. SMITH	2005L-A	3"	2"	FLOOR DRAIN AND 6" NICKEL BRONZE ROUND ADJUSTABLE STRAINER HEAD, PROVIDE SURE SEAL TRAP GUARD #SS3009.	
FD3	FLOOR DRAIN (EQ ROOM)	JAY R. SMITH	2110L	3"	2"	FLOOR DRAIN AND 8" GRATE WITH ADJUSTABLE STRANER HEAD, PROVIDE SURE SEAL TRAP GUARD #SS3009.	

SPECIALTY PLUMBING FIXTURE SCHEDULE NOTES

NOTES:
1. CLEANOUTS ARE TO BE THE SAME SIZE AS THE PIPES THEY SERVE, UP TO 4".
2. SIZE PER MANUFACTURER'S RECOMMENDATION.

WATER HEATER SCHEDLE

MARK	MANUFACTURER	MODEL	TANK SIZE (GAL)	ELECTRIC HEAT INPUT (KW)	ELECTRICAL DATA V	PH	NOTES
WH1	A.O. SMITH	DEL-50	50	5	208	3	1-5

WATER HEATER NOTES

GENERAL INFORMATION:
1. 140°F OUTLET TEMPERATURE.

NOTES:
1. NON-SIMULTANEOUS HEATING ELEMENTS.
2. MOUNT WATER HEATER ON HOLDRITE 50-SWHP-W SUSPENDED EQUIPMENT PLATFORM
3. PROVIDE AMTROL THERM-Z-TROL EXPANSION TANK #ST-5 AND DRAIN PAN PER MANUFACTURER RECOMENDATION. ROUTE DRAIN LINE DOWN TO FLOOR DRAIN WITH AIR GAP PER AHJ
4. PROVIDE WATTS # N36-M1 VACUUM RELIEF VALVE.
5. PROVIDE RECIRCULATION PUMP P-1 REFER TO SPECIALTY PLUMBING FIXTURE SCHEDULE ABOVE.

SAND/OIL SIZING CALCULATION

CARWASH TUNNEL DISCHARGE (GPM)	3.92
RETENTION TIME (MINUTES)	30
INTERCEPTOR SIZE CALCULATED (GALLONS)	118
INTERCEPTOR SIZE INSTALLED (GALLONS)	750

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/23

CHECKED BY: JPJ
DRAWN BY: JAS
DOCUMENT DATE: 01/10/23

2024.01.10 13:40:56-06'00'

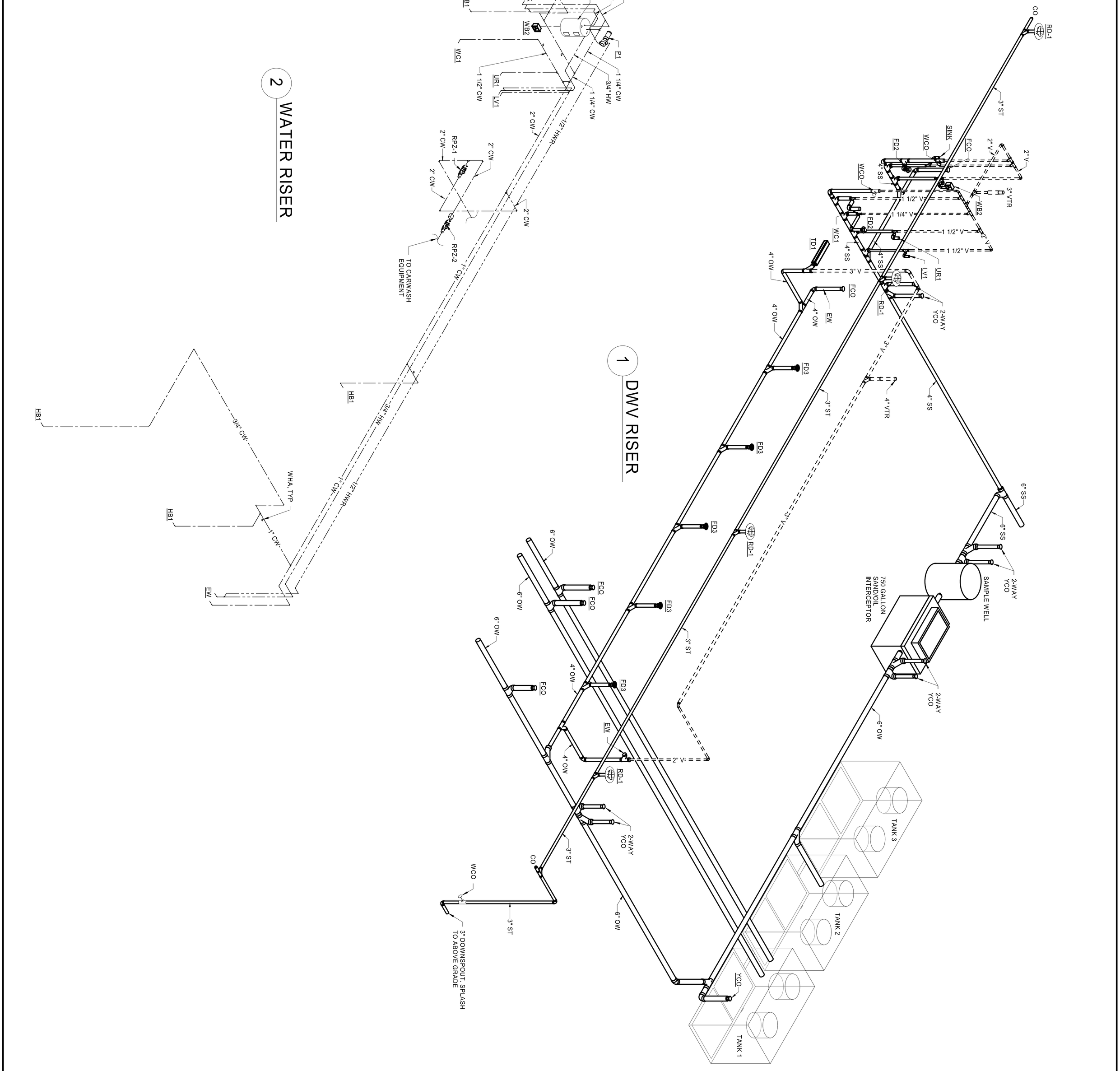
PROFESSIONAL ENGINEER
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota
Print Name: **John L. Mullins** License #: 44026
Signature: _____ Date: _____

PLUMBING SCHEDULES

SHEET: P400

1/10/2024 11:43:54 AM
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Add-IN (Utilities) SCHEDULES

1/10/2024 11:43:57 AM
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-P401-PLUMBING RISER DIAGRAM



SHEET: P401

PLUMBING RISER DIAGRAM

PROFESSIONAL ENGINEER
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota
Print Name: John L. Mullins
Signature:
Date License # 44028
2024.01.10 13:32:16-06'00'

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DRAWN BY:	JAS
DOCUMENT DATE:	01/10/23

TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

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5.2D - PLAN SET

ELECTRICAL SPECIFICATIONS

SOME SPECIFICATIONS MAY NOT BE USED FOR THIS PROJECT.

1.0 INTENT

1.1 FURNISH AND INSTALL A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

1.2 ALL DRAWINGS ARE SCHEMATIC IN NATURE AND THE REQUIRED INSTALLATION IS NOT LIMITED TO WHAT IS SHOWN. ALL APPURTENANCES NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM MUST BE INCLUDED IN THE CONTRACTORS BID AND WORK.

2.0 GENERAL

2.1 THE CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS BID OR WORK. NO ALLOWANCES WILL BE MADE FOR EXISTING CONDITIONS OR THE CONTRACTORS FAILURE TO ACCOMODATE EXISTING CONDITIONS ON HIS BID.

2.2 IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN CLARIFICATION OF ANY APPARENT CONFLICT OR INCONSISTENCY IN THE DRAWINGS, SPECIFICATION, OR DESIGN, PRIOR TO HIS BID AND IN WRITING WITH THE BID. OTHERWISE THE CONTRACTOR ACCEPTS RESPONSIBILITY TO CORRECT (AT HIS COST) ANY SUCH ITEMS TO MEET THE INTENT AS INTERPRETED BY THE ENGINEER.

2.3 ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE MOST RECENT ADOPTED EDITIONS OF THE NFPA, NATIONAL ELECTRIC CODE, IBC, APPLICABLE CITY AND STATE CODES AND ORDINANCES, THE AMERICANS WITH DISABILITIES ACT, ETC. ALL REGULATIONS (INCLUDING EXPACT 1992), INTERNATIONAL ENERGY CONSERVATION CODE (IECC)/TITLE 24/ASHRAE 90.1 AND UTILITY COMPANY REQUIREMENTS. THE FOREGOING CODES AND REGULATIONS ARE REQUIREMENTS AND ARE INCORPORATED IN THIS SPECIFICATION FOR THIS WORK BY REFERENCE.

2.4 THE CONTRACTOR SHALL COORDINATE AND PROVIDE INFORMATION AS REQUIRED TO ALL SERVING UTILITIES IN A TIMELY MANNER AS NECESSARY TO PROVIDE THE SERVICE REQUIRED AND MEET UTILITY REQUIREMENTS. IMMEDIATE COORDINATION WILL BE REQUIRED FOR MOST PROJECTS AND FIELD COORDINATE ALL REQUIREMENTS WITH UTILITY Co., PRIOR TO TRENCHING.

2.5 REFER TO ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL, AND/OR EQUIPMENT SUPPLIERS DRAWINGS AND SPECIFICATIONS FOR EXACT EQUIPMENT LOCATIONS, LOADS AND ADDITIONAL REQUIREMENTS. REPRESENTATIONS OF THE WORK SPECIFIC TO THE OTHER DISCIPLINES IS SHOWN ON THE ELECTRICAL DRAWINGS FOR CLARITY ONLY.

2.6 THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ALL EQUIPMENT HE SUPPLIES. ALL EQUIPMENT SHALL BE INSTALLED STRICTLY PER MANUFACTURERS RECOMMENDATIONS. OTHERWISE THE CONTRACTOR ASSUMES RESPONSIBILITY (AT HIS COST) TO CORRECT AND REMEDY ANY INSTALLATION NOT IN COMPLIANCE WITH THE MANUFACTURES RECOMMENDATIONS AND INTENTIONS AS INTERPRETED BY THE ENGINEER.

2.7 ANY VARIANCE OR EXCEPTIONS TO THE DRAWINGS AND SPECIFICATIONS MUST BE REQUESTED AND APPROVED IN WRITING. INTERNAL VERBAL APPROVALS WILL ONLY BE PROVIDED WHEN THE ENGINEER DETERMINES THIS TO BE JUSTIFIED AND MUST BE CONFIRMED IN WRITING TO BE FINAL.

2.8 THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS, VARIANCES, AND APPROVALS, ETC. (AT HIS COST) WHICH MAY BE REQUIRED FOR COMPLETION OF THIS WORK.

2.9 PRIOR TO ROUGH-IN, THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL LIGHT FIXTURES AND WIRING DEVICES TO INCLUDE MOUNTING HEIGHT AND LOCATIONS WITH ARCHITECT/OWNER. ALL CONFLICTS SHALL BE REPORTED TO THE ENGINEER/ARCHITECT.

2.10 THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT AND SUPPORT FOR PROGRESS AND FINAL INSPECTIONS. THIS INCLUDES COMPLETE ACCESS TO ALL EQUIPMENT. ADDITIONALLY A COMPLETE SET OF SPARE FUSES FOR ALL FUSES USED AND A 5% SUPPLY OF ALL LIGHT BULBS PROVIDED IN FIXTURES (NO LESS THAN A MAXIMUM OF 15 FOR EACH STYLE) SHALL BE PROVIDED TO THE OWNER AT FINAL INSPECTION.

2.11 RECONSTRUCTION (TO INCLUDE TENANT IMPROVEMENTS). ALL RECONSTRUCTION OF EXISTING FACILITIES AND EQUIPMENT SHALL REQUIRE COMPLETE RENOVATION (MAKE GOOD AS NEW) FOR ALL EXISTING EQUIPMENT UPON WHICH WORK IS PERFORMED OR EQUIPMENT WHICH IS AFFECTED BY THE WORK PERFORMED. THIS SHALL INCLUDE THESE FOLLOWING REQUIREMENTS:
- 2.11.1 VERIFICATION OF EXISTING SES COMPLIANCE WITH NEC "GROUNDING" ARTICLES.
- 2.11.2 VERIFICATION OF CABLE SIZE AND AMPACITY OF EXISTING FEEDERS AND BRANCH CIRCUITS WITH NEC TABLES.
- 2.11.3 EXISTING LIGHTS SHALL TO BE REUSED MUST BE CLEANED, RE-LAMPED, AND RESTORED TO "LIKE NEW" CONDITION.
- 2.11.4 EXISTING PANEL BOARDS, SWITCH BOARDS, AND TRANSFORMERS WHICH ARE INCLUDED IN THE PROJECT WORK SHALL HAVE PREVENTATIVE MAINTENANCE PERFORMED TO INCLUDE RE-TORQUING OF ALL LUGS, CLEANING AND INSPECTION.
- 2.11.5 VERIFY PROPER WORKING CONDITION OF ALL EXISTING EMERGENCY FIXTURES AND EXIT SIGNS. REPAIR OR REPLACE AS REQUIRED.

IN THE EVENT THAT INSPECTION REVEALS DISCREPANCIES AND/OR NONCOMPLIANCE THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING, AND EQUIPMENT BROUGHT INTO COMPLIANCE.

3.0 MATERIALS AND METHODS

3.1 THE USE OF EMT IS ACCEPTABLE IN ACCORDANCE WITH NEC ARTICLE "ELECTRICAL METALLIC TUBING", EMT SHALL NOT BE USED WHERE IT IS SUBJECT TO SEVERE PHYSICAL DAMAGE. ELBOWS SHALL BE COMPRESSION TYPE. MINIMUM TRADE CONDUIT SIZE IS 1/2" AND 3/4" FOR HOME RUNS.

3.2 CONDUCTORS SHALL BE 600V COPPER (98 % CONDUCTIVITY), MINIMUM LINE VOLTAGE WIRE SIZE OF #12 AWG. WIRE SMALLER THAN #10 SHALL HAVE THHN/THWN INSULATION. #4 AND LARGER SHALL HAVE XHHW/XHHW-2 INSULATION. ALL CONDUCTORS SHALL HAVE NOT RATED INSULATION. ALL 120V, 20A BRANCH CIRCUIT CONDUCTORS (#12) OVER 100' IN LENGTH TO BE #10'S MINIMUM. ALL 277V, 20A BRANCH CIRCUIT CONDUCTORS (#12) OVER 200' IN LENGTH TO BE #10'S MINIMUM.

3.3 WHEN SEPARATE BRANCH CIRCUIT NEUTRAL CONDUCTORS ARE USED WITH EACH PHASE CONDUCTOR OR SYSTEMS FURNITURE IS INDICATED, THE MINIMUM NEUTRAL CONDUCTOR SIZE SHALL BE #10 A.W.G. STRANDED COPPER.

3.4 ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE (MINIMUM 20 AMPS RATED FOR RECEPTACLES AND SWITCHES). HUBBELL, PASS & SEYMOUR, BRYANT, OR LEVITON ARE ACCEPTABLE. ALL SPECIAL RECEPTACLES AND GROUND FAULT PROTECTION DEVICES MUST BE PERMANENTLY MARKED WITH ENGRAVED COVER PLATES INDICATING USE AND CIRCUIT NUMBER.

3.5 COVER PLATES AND DEVICES SHALL BE PHENOLIC PLASTIC (WHITE OR COLOR SELECTED BY ARCHITECT) IN OFFICE/COMMERCIAL/OR LIVING AREAS, AND GALVANIZED STEEL IN WAREHOUSE/INDUSTRIAL/MANUFACTURING AREAS OR AREAS SUBJECT TO PHYSICAL ABUSE.

3.6 ALL CONDUCTORS TO BE CONCEALED EXCEPT TO SURFACE MOUNTED PANELS AND AT THE CEILING OF EXPOSED STRUCTURE AREAS. CONDUITS WILL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.

3.7 FLEXIBLE METAL CONDUIT (SEAL TITE FOR EXTERIOR APPLICATIONS) SHALL BE USED FOR CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION (E.G. MOTORS) WITH A MAX. OF 6ft.

3.8 THE USE OF MC CABLE IS ACCEPTABLE (UPON OWNER NOTIFICATION AND APPROVAL) AND MAY BE USED IN ACCORDANCE WITH NEC ARTICLE "METAL-CLAD CABLE: TYPE MC", BUT LIMITED TO USE FOR CONCEALED BRANCH CIRCUITS ONLY. ADDITIONALLY MC CABLE ALLOWED OUTDOORS ONLY WHERE INDICATED ON ON DRAWINGS. MC CABLE INSTALLED OUTDOORS SHALL BE WET LOCATION RATED.

3.9 NON-METALLIC CONDUIT (MIN. SCHEDULE 40) MAY BE USED ONLY IN OR UNDER SLABS & IN CONCRETE OR MASONRY WALLS. MIN. 24" COVER REQUIRED FOR UNDERGROUND USE.

3.10 FUSES SHALL BE BUSSMAN, LITTLEFUSE, OR EQUAL SHAWMUT.

3.11 CONDUCTORS WILL BE SOLID AND/OR STRANDED WITH INSULATION CONTINUOUSLY COLOR COATED UP TO AND INCLUDING SIZE #6 A.W.G. GROUNDING/BONDING CONDUCTORS SHALL BE U.L. LABELED ROPE STRAND.

3.12 CONNECTIONS OR SPLICES SHALL BE EXOTHERMIC WELD (CAD WELD OR THOMAS AND BETTS FURSEWELD) FOR GROUNDING/BONDING CONDUCTORS.

3.13 NEW CONDUCTORS SHALL BE CONTINUOUS. HYDRAULIC CRIMP SPLICES OR CONNECTIONS ARE EXCEPTIONS AND REQUIRE SPECIFIC APPROVAL IN WRITING BY HAWKINS DESIGN GROUP.

3.14 ALL CONDUIT SUPPORT SYSTEMS SHALL BE INSTALLED ON THE BUILDING STRUCTURE. UNISTRUT, BEELINE, SUPERSTRUT STEEL CITY SPRING STEEL FASTENERS OR CADDY MOUNTING SYSTEMS ARE ACCEPTABLE. NO CONDUIT WILL BE SUPPORTED BY THE CEILING WIRES, TIE WIRE OR GRID SYSTEM. PERFORATED STRAPS OR OTHER PIPING AND CONDUIT STRAPS ARE NOT ACCEPTABLE SUPPORTS.

3.15 ACCEPTABLE MANUFACTURES FOR SWITCH GEAR, DISTRIBUTION GEAR AND RELATED COMPONENTS ARE: SQUARE D, ACME TRANSFORMERS, GENERAL ELECTRIC, SIEMENS, HPS, AND CUTLER-HAMMER.

3.16 CONDUCTORS SHALL BE COLOR CODED FOR BRANCH CIRCUITS AND PHASE LEGS OF FEEDERS TO PANEL BOARDS, SWITCHBOARDS, ETC. IN ACCORDANCE WITH NEC AND LOCAL MUNICIPAL REQUIREMENTS. SPECIFIC REQUIREMENTS INCLUDE THE FOLLOWING.
- 120-V, 2-WIRE CIRCUIT: GROUNDED NEUTRAL-WHITE; UNGROUNDED LEG-BLACK.
- 208Y/120-V, 3-PHASE, 4-WIRE: GROUNDED NEUTRAL-WHITE;PHASE A-BLACK; PHASE B-RED; PHASE C-BLUE.
- 240/120-V, 3 WIRE, SINGLE PHASE CIRCUIT: GROUNDED NEUTRAL-WHITE; PHASE A-BLACK; PHASE B-RED.
- 240-V, DELTA, 3-PHASE, 3-WIRE: PHASE A-BLACK; PHASE B-RED; PHASE C-BLUE.
- 240/120-V, 3-PHASE, 4-WIRE, HIGH-LEG DELTA: GROUNDED NEUTRAL-WHITE;HIGH LEG (208-V TO NEUTRAL)-ORANGE; PHASE A-BLACK; PHASE C-BLUE
- 480Y/277-V, 3-PHASE, 4-WIRE: GROUNDED NEUTRAL-GRAY;PHASE A-BROWN; PHASE B-ORANGE; PHASE C-YELLOW.
- 480-V, DELTA, 3-PHASE, 3-WIRE: PHASE A-BROWN; PHASE B-ORANGE; PHASE C-YELLOW.
- 480-V, DELTA, 3-PHASE, 3-WIRE: PHASE A-BROWN; PHASE B-ORANGE; PHASE C-YELLOW.
- EQUIPMENT GROUNDING CONDUCTORS-GREEN; ISOLATED GROUNDS-GREEN WITH A YELLOW STRIPE.

3.17 ALL INSTALLATIONS WITHIN PLENUM RATED CEILING SPACE SHALL BE IN ACCORDANCE WITH NEC ARTICLE "WIRING METHODS" WITH REGARDS TO SMOKE DEVELOPMENT AND FLAME SPREAD.

3.18 ALL UNDERGROUND CABLE, PIPE AND CONDUITS SHALL BE DETECTABLE (METALLIC) OR HAVE A DETECTABLE UNDERGROUND LOCATION DEVICE INSTALLED WITH IT. THE RECOMMENDED DETECTABLE UNDERGROUND LOCATION DEVICE IS A #18 OR LARGER COPPER TRACER WIRE SECURELY ATTACHED TO THE TOP OF ANY NON-METALLIC CABLE, PIPE OR CONDUIT AT 8'-0" O/C AND SHALL HAVE A MINIMUM OF 12" OF TRACER WIRE ACCESSIBLE AT ALL ABOVE GRADE TERMINATIONS.

3.19 ALL HORIZONTAL UNDERGROUND CONDUIT RUNS (INCLUDING UNDER CONCRETE SLABS) SHALL BE A MINIMUM OF 24" BELOW GRADE.

3.20 ALL MATERIAL & DEVICES USED EXTERIOR OF THE BUILDING SHALL BE LISTED U.L. FOR WATERPROOF APPLICATIONS.

4.0 SUBMITTALS

4.1 SUBMIT 6 SETS OF SHOP DRAWINGS AND SAMPLES FOR ALL EQUIPMENT PRIOR TO ORDERING IN A TIMELY MANNER, SUBMITTALS SHALL INCLUDE LIGHT FIXTURES (INCLUDING LIGHT POLES), LIGHTING CONTROLS, SWITCHBOARDS, PANELBOARDS, BREAKERS, STARTERS, HVAC ELECTRICAL EQUIPMENT AND TRANSFORMERS.
- 4.1.1 SHOP DRAWINGS SHALL INCLUDE LAYOUT DIMENSIONS AND IDENTIFICATION OF SPECIFIC EQUIPMENT FOR INSTALLATION, MINIMUM NEC CLEARANCES SHALL BE INDICATED.
- 4.1.2 THE CONTRACTOR SHALL INCLUDE COMPARISON DATA AND SAMPLES FOR BOTH THE SUBSTITUTE AND SPECIFIED ITEMS WHEN SUBSTITUTIONS ARE PROPOSED. THE CONTRACTOR REMAINS RESPONSIBLE TO PROVIDE THE ORIGINALLY SPECIFIED INSTALLATION IN ACCORDANCE WITH THE ORIGINAL DELIVERY DATE (AT HIS COST) WHEN SUBSTITUTIONS ARE NOT ACCEPTED.

4.2 THE CONTRACTOR SHALL PROVIDE PROOF OF PERFORMANCE BOND WITH HIS INITIAL SUBMITTALS (E.G. SHOP DRAWINGS) TO INCLUDE WARRANTY FOR THE WARRANTY PERIOD (2 YEARS).

4.3 THE CONTRACTOR SHALL SUBMIT COMPLETE AND ACCURATE "AS BUILT" DRAWING TO THE OWNER AND ENGINEER WITHIN 2 WEEKS OF OWNER ACCEPTANCE. PROVIDE 4 SETS OF BLUELINES OR REPRODUCIBLES. FAILURE TO COMPLY WILL RESULT IN WITHHOLDING OF PAYMENTS DUE, AND ASSESSMENT OF CHARGES (AGAINST THE CONTRACTOR) FOR AS-BUILT DEVELOPMENT BY THE ENGINEER AT THE CURRENT HOURLY RATE.

4.4 PROVIDE A LETTER TO THE OWNER AND ENGINEER CERTIFYING ALL EQUIPMENT AND TERMINATION'S ARE PROPERLY TORQUED. THIS CERTIFICATION SHALL BE EXECUTED BY A LICENSED CONTRACTOR, AND WRITTEN CERTIFICATION PROVIDED ON COMPANY LETTERHEAD.

4.5 PROVIDE 2 COPIES OF ALL MANUFACTURER/SUPPLIER WARRANTIES AND GUARANTEES TO THE OWNER WITHIN 2 WEEKS OF FINAL ACCEPTANCE BY THE OWNER.

4.6 TESTS
- 4.6.1 SUBMIT 2 COPIES OF ALL INDEPENDENT TEST RESULTS FOR THE ELECTRICAL POWER DISTRIBUTION SYSTEM AS A COMPLETE PACKAGE TO THE OWNER AND ENGINEER. PACKAGE MUST PROVIDE SPECIFIC VALUES OF TEST DATA OBTAINED AGAINST ACCEPTANCE CRITERIA (SIMPLE PASS/FAIL ALONE IS INADEQUATE).
- 4.6.2 TESTING PERSONAL SHALL BE CERTIFIED BY THE NATIONAL ELECTRIC TESTING ASSOCIATION (NETA) OR NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET).
- 4.6.3 ALL TESTING SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS OR NATIONALLY RECOGNIZED STANDARDS AND GUIDELINES.
- 4.6.4 GROUNDING SYSTEM FALL OF POTENTIAL (RESISTANCE TO GROUND) TESTING.
  - 4.6.4.1 GROUND SHALL PROVIDE 5 OHMS OR LESS RESISTANCE TO GROUND AND LESS THAN 0.5 OHMS POINT-TO-POINT BETWEEN THE MAIN GROUNDING ELECTRODE SYSTEM AND ELECTRICAL EQUIPMENT FRAMES, SYSTEM NEUTRAL AND/OR DERIVED NEUTRAL POINTS (REFERENCE IEEE STANDARDS 81-1983 AND 1991) AND SHALL NOT BE PERFORMED WITHIN 24 HOURS AFTER RAINFALL.
- 4.6.5 OVER-POTENTIAL (PROOF) TESTING
  - 4.6.5.1 SHALL BE PERFORMED ON ALL BUSSES 1000A OR GREATER OR 208 VOLTS OR GREATER OF SERVICES GREATER THAN 400 AMPS.
  - 4.6.5.2 TEST BOTH PHASE-TO-PHASE AND PHASE-TO-GROUND FOR AT LEAST ONE MINUTE.
- 4.6.6 GROUND FAULT PROTECTION TESTING
  - 4.6.6.1 PROVIDE GROUND-FAULT PROTECTION TESTING BY CURRENT INJECTION AT SENSOR.
  - 4.6.6.2 TEST PRIMARY CONTROL VOLTAGE NOT TO EXCEED 57% OF THE RATED VOLTAGE.
  - 4.6.6.3 VERIFY PICK-UP TIME AND TIME-DELAY SETTINGS PROVIDED BY ENGINEER.
  - 4.6.6.4 TEST GFP RELAY TIMING.
  - 4.6.6.5 TEST INTEGRITY OF GROUNDED CONDUCTOR AND ITS INSULATION RESISTANCE TO GROUND.
- 4.6.7 INSULATION RESISTANCE (MEGGER) TESTING
  - 4.6.7.1 TESTING SHALL BE 1000 VOLTS FOR ONE MINUTE AND SHALL PROVIDE 50 MEGAOHMS RESISTANCE OR GREATER.
  - 4.6.7.2 TEST BOTH PHASE-TO-PHASE AND PHASE-TO-GROUND.

5.0 WARRANTY

5.1 THE CONTRACTOR SHALL GUARANTEE ALL MATERIAL AND/OR WORKMANSHIP FURNISHED BY HIM UNDER THIS CONTRACT FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. ANY DEFECTS DEVELOPING DURING THE WARRANTY PERIOD TRACEABLE TO MATERIALS OR WORKMANSHIP SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.

5.2 THE OWNER RETAINS THE RIGHT TO REQUIRE REMOVAL AND INSTALLATION (AT ANY TIME) OF ANY MATERIAL OR EQUIPMENT NOT IN COMPLIANCE WITH THE PROVISIONS AND STANDARDS OF THESE DRAWINGS AND SPECIFICATIONS. NO CLAIM FOR ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK PERFORMED IN THIS REGARD.

5.3 THE CONTRACTOR AGREES TO TRANSFER ALL MANUFACTURER'S/SUPPLIER'S WARRANTIES AND GUARANTEES TO THE OWNER. THIS INCLUDES COMPLETION OF ALL DOCUMENTATION FOR THE MANUFACTURER/SUPPLIER.

6.0 SERVICE

6.1 PROVIDE AND INSTALL NEW SERVICE SECTION AS SHOWN ON DRAWINGS. S.E.S. SHALL BEAR U.L. LABEL. HAVE COPPER BUSSING – SILVER PLATED, AND AMPERAGE RATING AS SHOWN ON DRAWINGS. METERING AND PRIMARY PULL SECTION SHALL BE BARRERED FROM OTHER WORK AND APPROVED BY BOTH THE LOCAL UTILITY COMPANY AND AUTHORITY HAVING JURISDICTION.

6.2 GROUND FAULT PROTECTION SHALL BE PROVIDED FOR SERVICES (480V L-L) WITH DISCONNECTS 1000A OR GREATER.

6.3 GROUND FAULT PROTECTION MAINS AND SUB-MAINS MUST HAVE AUDIBLE/VISIBLE ALARMS.

6.4 ENCLOSURES SHALL MEET U.L. AND PUBLIC UTILITY REQUIREMENTS–PHYSICALLY BARRIERED BETWEEN SECTIONS, LINE AND LOAD, BOTH BARRIERED.

6.5 NO COVERS GREATER THAN 1/3 HEIGHT OF EQUIPMENT.

6.6 FULL SIZED NEUTRAL BUSSING AND FULLY RATED (NON-TAPERED) BUSSING WILL BE STANDARD. THIS INCLUDES MAXIMUM BUSSING RATINGS FOR SUPPLY AND SECTION (i.e. HORIZONTAL AND VERTICAL) BUSSES (UNLESS NOTED OTHERWISE). CENTER FEED SUPPLY BUSSES SHALL BE MAXIMUM RATED ON EITHER SIDE OF THE FEED. ALL SPACE WILL BE FULLY BUSSED FOR FUTURE. ALL BUSSING WILL BE PHYSICALLY BARRIERED.

6.7 ALL SERVICES SHALL BE U.L. LISTED FOR FRONT ACCESSIBILITY ONLY.

6.8 ALL SERVICE SECTIONS SHALL BE OF A CONSISTENT HEIGHT AND INCLUDE PROTECTION OF OPERATIONAL DEVICES AND METERS FROM PHYSICAL DAMAGE.

6.9 PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL FREESTANDING ELECTRICAL SERVICE ENTRANCE EQUIPMENT PER LOCAL UTILITY COMPANY SPECIFICATIONS.

6.10 SERVICE COORDINATION STUDY
- 6.10.1 DESCRIPTION
  - 6.10.1.1 WHEN ADJUSTABLE TRIP CIRCUIT BREAKERS OR 2-TIER GROUND FAULT SYSTEM IS SPECIFIED, PROVIDE A SHORT-CIRCUIT AND PROTECTIVE DEVICE COORDINATION STUDY FOR THE ELECTRICAL DISTRIBUTION SYSTEM. THE INTENT OF THESE STUDIES ARE TO VERIFY THAT THE SPECIFIED AND SUPPLIED EQUIPMENT ARE PROPERLY RATED, CORRECTLY APPLIED, AND WITHIN INDUSTRY AND MANUFACTURER'S TOLERANCES.
  - 6.10.1.2 THE SHORT CIRCUIT STUDY SHALL INCLUDE ALL PORTIONS OF THE ELECTRICAL DISTRIBUTION SYSTEM FROM THE NORMAL AND ALTERNATE SOURCES OF POWER THROUGHOUT THE DISTRIBUTION SYSTEM DOWN TO THE SMALLEST PROTECTIVE DEVICE. THE SHORT CIRCUIT STUDY SHALL CONSIDER OPERATION DURING NORMAL CONDITIONS, ALTERNATE OPERATIONS, EMERGENCY POWER CONDITIONS AND ANY OTHER OPERATIONS WHICH COULD RESULT IN MAXIMUM FAULT CONDITIONS.
  - 6.10.1.3 THE COORDINATION STUDY WILL DETERMINE THE CORRECT SETTINGS FOR THE PROTECTIVE DEVICES WHICH WILL MINIMIZE THE DAMAGE CAUSED BY AN ELECTRICAL FAULT AND ALLOW FOR SELECTIVE COORDINATION BETWEEN THE DEVICES. THE COORDINATION STUDY SHALL INCLUDE THE CLOSET UPSTREAM UTILITY PROTECTIVE DEVICE DOWN TO THE PANELBOARD MAIN, BRANCH OR FEEDER CIRCUIT BREAKERS. THE COORDINATION STUDY SHALL CONSIDER OPERATION DURING NORMAL CONDITIONS, ALTERNATE OPERATIONS AND DURING EMERGENCY POWER CONDITIONS.
- 6.10.2 QUALIFICATIONS
  - 6.10.2.1 THE CONTRACTOR SHALL HAVE THE COORDINATION STUDY PREPARED BY QUALIFIED ENGINEERS OF AN INDEPENDENT CONSULTANT AND OR MANUFACTURER. THE CONSULTANT/MANUFACTURER SHALL BE AN EXPERIENCED REGISTERED PROFESSIONAL ELECTRICAL ENGINEER (LICENSED IN THE STATE WHERE THE PROJECT IS COMPLETED) SPECIALIZING IN PERFORMING POWER SYSTEM STUDIES.
- 6.10.3 SUBMITTALS
  - 6.10.3.1 THE CONTRACTOR SHALL SUBMIT THE POWER SYSTEM STUDIES IN CONJUNCTION WITH THE EQUIPMENT SUBMITTALS. THE ELECTRICAL SUBMITTALS WILL BE REVIEWED BUT WILL NOT BE APPROVED UNLESS THE POWER SYSTEM STUDIES HAVE BEEN RECEIVED AND REVIEWED.

6.11 PROTECTIVE DEVICE COORDINATION STUDY
- 6.11.1 ALL REQUIREMENTS OF THE CURRENT NATIONAL ELECTRICAL CODE AND NFPA 5000 SHALL BE ADHERED TO.
- 6.11.2 THE COORDINATION STUDY SHALL INCLUDE THE CLOSEST UPSTREAM UTILITY PROTECTIVE DEVICE DOWN TO THE PANELBOARD MAIN, BRANCH, OR FEEDER CIRCUIT BREAKERS. PREPARE THE COORDINATION CURVES TO DETERMINE THE REQUIRED SETTINGS OF PROTECTIVE DEVICES TO ASSURE SELECTIVE COORDINATION.
- 6.11.3 THE PHASE AND GROUND OVERCURRENT PROTECTION SHALL BE INCLUDED, AS WELL AS SETTINGS FOR ALL OTHER ADJUSTABLE PROTECTIVE DEVICES.
- 6.11.4 GRAPHICALLY ILLUSTRATE ON LOG-LOG PAPER THAT ADEQUATE TIME SEPARATION EXISTS BETWEEN DEVICES. SUFFICIENT CURVES SHALL BE USED TO CLEARLY INDICATE THE COORDINATION ACHIEVED BETWEEN DEVICES. REASONABLE COORDINATION INTERVALS AND SEPARATION OF CHARACTERISTIC CURVES SHALL BE MAINTAINED. PLOT THE SPECIFIC TIME-CURRENT CHARACTERISTICS OF EACH PROTECTIVE DEVICE IN SUCH A MANNER THAT THE UPSTREAM DEVICES WILL BE CLEARLY DEPICTED ON THE SHEET.
- 6.11.5 THE FOLLOWING SPECIFIC INFORMATION SHALL ALSO BE SHOWN ON THE COORDINATION CURVES:
  - 6.11.5.1 DEVICE IDENTIFICATIONS.
  - 6.11.5.2 TIME AND CURRENT RATIO FOR CURVES.
  - 6.11.5.3 FUSE, CIRCUIT BREAKER, AND RELAY CURVES, SHOWING COMPLETE OPERATING BANDS OF LOW VOLTAGE CIRCUIT BREAKER TRIP DEVICES.
  - 6.11.5.4 LOW VOLTAGE EQUIPMENT CIRCUIT BREAKER TRIP DEVICES, INCLUDING MANUFACTURERS TOLERANCE BANDS.
  - 6.11.5.5 PERTINENT TRANSFORMER FULL-LOAD CURRENTS AT 100 AND 600 PERCENT.
  - 6.11.5.6 GROUND FAULT PROTECTIVE DEVICE SETTINGS.
  - 6.11.5.7 OTHER SYSTEM LOAD PROTECTIVE DEVICES FOR LARGEST BRANCH CIRCUIT AND FEEDER CIRCUIT BREAKER IN EACH MOTOR CONTROL CENTER AND PANELBOARD.
- 6.11.6 DEVELOP A TABLE TO SUMMARIZE THE SETTINGS SELECTED FOR THE PROTECTIVE DEVICES. INCLUDE IN THE TABLE THE FOLLOWING:
  - 6.11.6.1 DEVICE IDENTIFICATIONS.
  - 6.11.6.2 DURRENT TRANSFORMER RATIO, RELAY TAP, TIME DELAY AND INSTANTANEOUS PICKUP.
  - 6.11.6.3 CIRCUIT BREAKER SENSOR RATING, LONG-TIME, SHORT-TIME AND INSTANTANEOUS SETTINGS AND TIME BANDS.
  - 6.11.6.4 FUSE RATING AND TYPE.
  - 6.11.6.5 GROUND FAULT PICKUP AND TIME DELAY.

6.12 ANALYSIS
- 6.12.1 ANALYZE THE SHORT CIRCUIT CALCULATIONS AND HIGHLIGHT ANY EQUIPMENT THAT IS DETERMINED TO BE UNDERRATED AS SPECIFIED OR NOT COORDINATED. PROPOSE APPROACHES TO EFFECTIVELY PROTECT THE UNDERRATED EQUIPMENT. PROPOSED MAJOR CORRECTIVE MODIFICATIONS WILL BE TAKEN UNDER ADVISEMENT BY THE ENGINEER AND THE CONTRACTOR WILL BE GIVEN FURTHER INSTRUCTIONS.
- 6.12.2 AFTER DEVELOPING THE COORDINATION CURVES, HIGHLIGHT AREAS LACKING COORDINATION. FOR EACH SHEET, PRESENT A TECHNICAL EVALUATION WITH A DISCUSSION OF THE LOGICAL COMPROMISES FOR BEST COORDINATION.

6.13 REPORT
- THE RESULTS OF THE POWER SYSTEM STUDY SHALL BE SUMMARIZED IN A FINAL REPORT. THE REPORT SHALL INCLUDE THE FOLLOWING SECTIONS:
  - 6.13.1 PROTECTIVE DEVICE TIME VERSUS CURRENT COORDINATION CURVES.
  - TABULATIONS OF RELAY AND CIRCUIT BREAKER TRIP SETTINGS, FUSE SELECTION AND COMMENTARY REGARDING SAME.
  - 6.13.2 COPIES OF THE MANUFACTURERS TIME CURRENT CURVES FOR THE DEVICES STUDIED AND PLOTTED ON THE TIME CURRENT CURVES.

7.0 DISTRIBUTION

7.1 PANELBOARDS (EXISTING): ADD CIRCUIT BREAKERS (FULL SIZED BREAKERS) AS REQUIRED FOR CIRCUITING. MATCH PRECISELY BRAND AND PROVIDE A.I.C. RATING AS INDICATED ON DRAWINGS. TANDUM PHOG-PHOG-PHOG BREAKERS ARE NOT PERMITTED. ALL LUGS OR CONNECTORS TO BE 60°C FOR PANEL LESS THAN OR EQUAL 100 AMPS AND 75°C RATED OF GREATER THAN 100AMP'S MINIMUM.

7.2 PANELBOARDS (NEW): SHALL BE RATED AS SHOWN ON DRAWINGS WITH PLATED COPPER BUSSING. PROVIDE NEMA ENCLOSURES AS REQUIRED BY CODE FOR REGULATION. BACK BOXES ENLARGED FOR DOUBLE NEUTRALS AND LUGS CAPABLE OF OVERSIZING ISOLATED GROUND AND NORMAL GROUND BUS. ALL LUGS OR CONNECTORS TO BE 60°C FOR PANEL LESS THAN OR EQUAL 100 AMPS AND 75°C RATED OF GREATER THAN 100AMPS MINIMUM. PANELBOARD CABINET SHALL BE EQUIPPED WITH PIANO HINGES WITH DOOR IN DOOR CONSTRUCTION.

7.3 CIRCUIT BREAKERS WILL BE SWITCH RATED AND AMBIENT COMPENSATED FOR ALL CIRCUITS. PROVIDE SWITCHED NEUTRALS ON ALL CIRCUIT BREAKERS FEEDING CLASS 1 AND CLASS 2 AREAS WITH NEUTRALS. GFCI ON CIRCUITS WITH NEUTRALS TO DEVICES ABOVE CLASSIFIED AREAS. ALL LIGHTING PANELS/CIRCUIT BREAKERS SHALL BE RATED FOR CONTINUOUS DUTY. HACR RATED BREAKERS SHALL BE INSTALLED FOR ALL HVAC CIRCUITS CONTAINING MULTIPLE MOTOR LOADS.

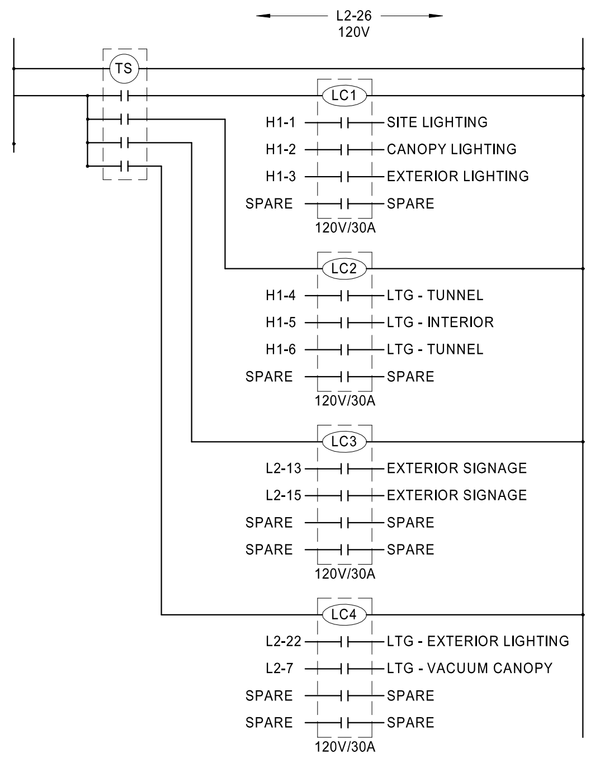
7.4 ALL EQUIPMENT (PANELS, DISCONNECT SWITCHES, STARTERS, ETC.) WILL BE MARKED WITH BLACK OR RED ENGRAVERS STOCK TAGS EMBOSSED WITH 1/4" HIGH LETTERS DESCRIBING EACH ITEM. CONDUCTORS WILL BE MARKED AT ALL TERMINATION AND JUNCTION POINTS (PANELS, JUNCTION BOXES, SPLICES, ETC.) WITH LABELS BEARING THE PANEL AND CIRCUIT NUMBER WHICH FEEDS EACH CONDUCTOR (PER NEC 210.4, 300.3).

7.5 ALL PANELBOARDS WILL HAVE TYPED DIRECTORY CARDS IDENTIFYING ALL CIRCUITS AND SPACES.

7.6 ACCEPTABLE MANUFACTURERS FOR PANELBOARDS, SWITCHBOARDS, AND TRANSFORMERS SHALL BE PER SECTION 3.15 OF THIS SPECIFICATION. TRANSFORMERS 15 KVA AND ABOVE SHALL BE 150°C TEMPERATURE RISE ABOVE 40°C AMBIENT. ALL INSULATING MATERIALS TO BE IN ACCORDANCE WITH NEMA ST20–1972 STANDARDS FOR A 220°C UL COMPONENT RECOGNIZED INSULATION SYSTEM. SINGLE PHASE TRANSFORMERS 15 KVA THROUGH 50 KVA, AND THREE PHASE TRANSFORMERS THROUGH 45 KVA SHALL BE DESIGNED SO THEY CAN BE EITHER FLOOR OR WALL MOUNTED. THE TRANSFORMER SHALL BE LISTED BY UNDERWRITERS LABORATORY FOR SPECIFIED TEMPERATURE RISE. TRANSFORMERS 75 KVA AND ABOVE SHALL BE DESIGNED FOR FLOOR INSTALLATION ONLY U

5.2D - PLAN SET

TS = TIMECLOCK(ET8415CR) - 4-CHANNEL, 24 HOUR, 365 DAY PROGRAMABLE ASTRONOMICAL TIMECLOCK WITH OVERRIDE SWITCH, INTERMATIC OR SIMILAR

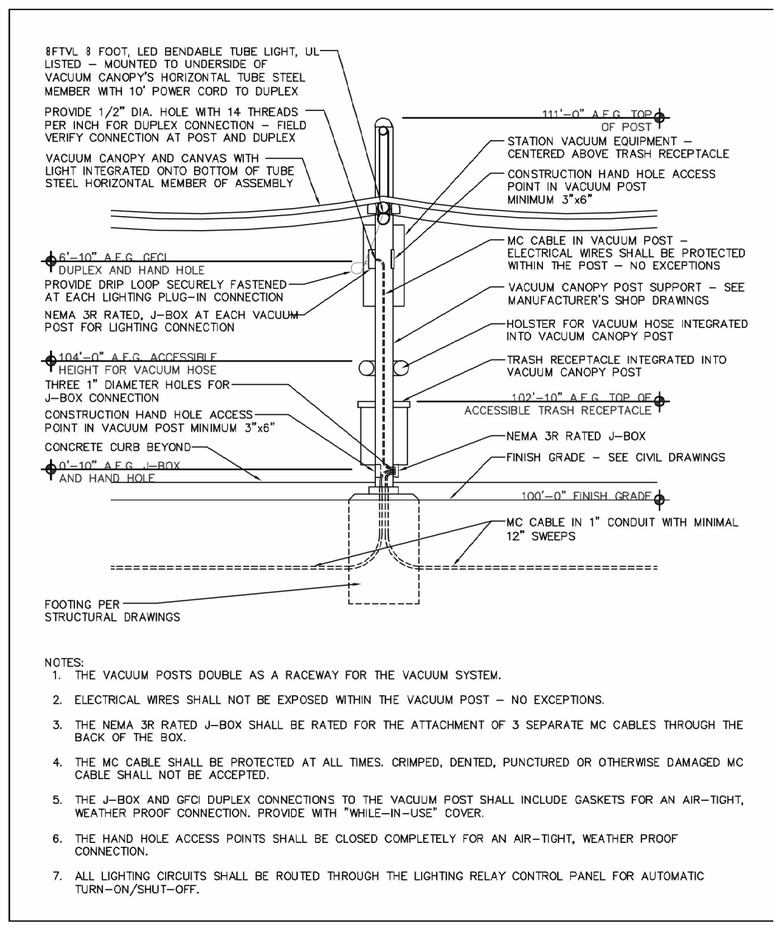


ELECTRICALLY HELD LIGHTING CONTACTORS: SQUARE D TYPE LG60-V02 CLASS 8903 IN NEMA 3R ENCLOSURE, CONTACTS SHALL BE RATED FOR 30A FLUORESCENT, 20A TUNGSTEN. OR SIMILAR.

NOTE

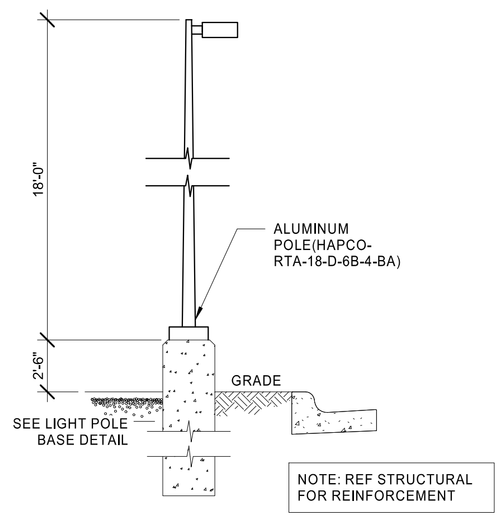
SET THE TIMECLOCK TO TURN OFF AT CLOSING TIME. VERIFY TIME WITH OWNER.

5 CONTACTOR DETAIL
NTS

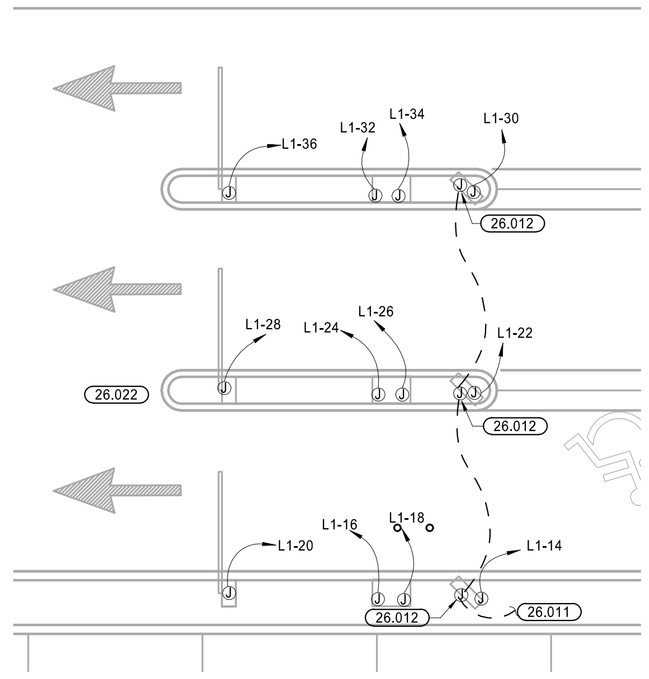


NOTES:
1. THE VACUUM POSTS DOUBLE AS A RACEWAY FOR THE VACUUM SYSTEM.
2. ELECTRICAL WIRES SHALL NOT BE EXPOSED WITHIN THE VACUUM POST – NO EXCEPTIONS.
3. THE NEMA 3R RATED J-BOX SHALL BE RATED FOR THE ATTACHMENT OF 3 SEPARATE MC CABLES THROUGH THE BACK OF THE BOX.
4. THE MC CABLE SHALL BE PROTECTED AT ALL TIMES. CRIMPED, DENTED, PUNCTURED OR OTHERWISE DAMAGED MC CABLE SHALL NOT BE ACCEPTED.
5. THE J-BOX AND GFCI DUPLEX CONNECTIONS TO THE VACUUM POST SHALL INCLUDE GASKETS FOR AN AIR-TIGHT, WEATHER PROOF CONNECTION. PROVIDE WITH "WHILE-IN-USE" COVER.
6. THE HAND HOLE ACCESS POINTS SHALL BE CLOSED COMPLETELY FOR AN AIR-TIGHT, WEATHER PROOF CONNECTION.
7. ALL LIGHTING CIRCUITS SHALL BE ROUTED THROUGH THE LIGHTING RELAY CONTROL PANEL FOR AUTOMATIC TURN-ON/SHUT-OFF.

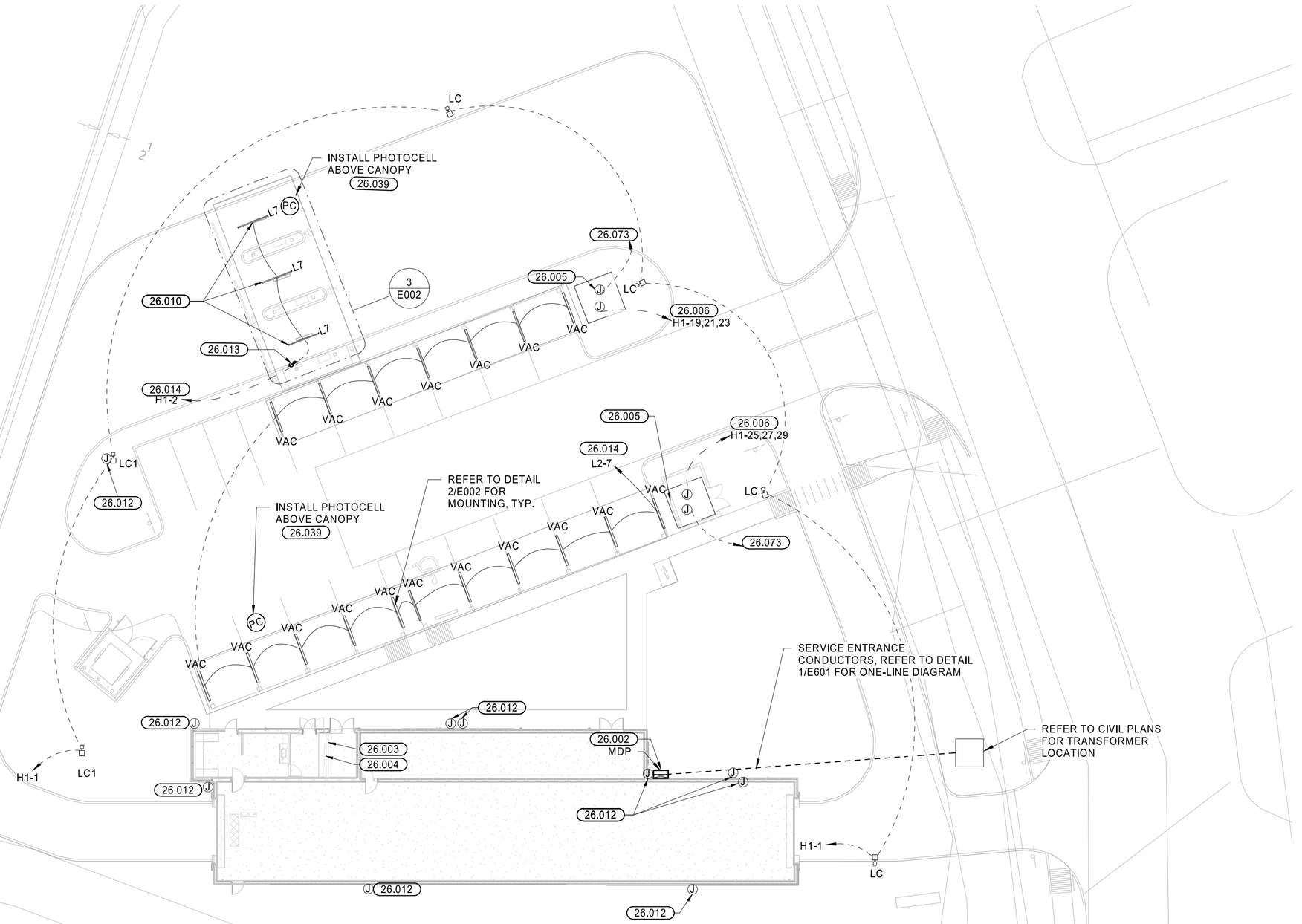
2 VACUUM POLE MOUNTING DETAIL
NTS



4 LIGHT POLE DETAIL
NTS



3 ENLARGED CANOPY PLAN
1/8" = 1'-0"



1 ELECTRICAL SITE PLAN
1" = 20'-0"

GENERAL NOTES

1. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
2. ELECTRICAL CONTRACTOR SHALL CONTACT TELEPHONE COMPANY REGARDING EXACT LOCATION OF ALL PRIMARY SERVICE EQUIPMENT, TRENCH LOCATION, ETC.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY TELEPHONE TRENCHING, BACKFILL, AND CONDUIT STUBS INTO TRENCH AS REQUIRED BY TELEPHONE COMPANY AND TO THEIR SPECIFICATIONS.
4. ALL WIRING FOR OUTSIDE LIGHTING SHALL BE A MINIMUM OF #10 COPPER WITH TYPE THWN INSULATION. RUN UNDERGROUND CIRCUITS IN 1" P.V.C. AND PROVIDE A #10 COPPER BOND IN ADDITION TO CIRCUIT CONDUCTORS. UNDERGROUND WIRING SHALL COMPLY WITH APPLICABLE CODES OF THE NEC.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE NECESSARY SECONDARY CONDUCTORS, POWER TRENCHING, BACKFILL AND CONCRETE PADS FOR TRANSFORMERS AND SERVICE EQUIPMENT. ADDITIONALLY PROVIDE CONDUIT STUBS INTO TRENCH PER POWER COMPANY SPECIFICATIONS AND REQUIREMENTS.
6. ALL WIRING SHALL BE COPPER. WIRING #4 AWG AND LARGER SHALL BE XHHW TYPE INSULATION.

KEYNOTES

26.002	MAIN DISTRIBUTION PANEL AND UTILITY METER LOCATION. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
26.003	VOICE/DATA BUILDING PENETRATIONS, STUB UP NEAR TELEPHONE BOARD.
26.004	TELEPHONE BOARD LOCATION.
26.005	VACUUM EQUIPMENT WITH (2) 480V, 3PHASE, 40HP, 52FLA MOTORS. VERIFY EXACT ELECTRICAL REQUIREMENTS WITH VENDOR AND MANUFACTURER INSTRUCTIONS.
26.006	CIRCUITS BACK TO VACUUM EQUIPMENT CONTROL PANEL, PROVIDED BY MANUFACTURER. VACUUM EQUIPMENT CONTROL PANEL IS LOCATED IN MAIN BUILDING ROOM. REFER TO EQUIPMENT PLAN SHEET E112
26.010	COORDINATE EXACT INSTALLATION REQUIREMENTS WITH MANUFACTURER'S INSTALATION DOCUMENTS PRIOR TO ROUGH-IN
26.011	3/4" EMPTY CONDUIT WITH PULL ROPE ROUTED TO TMB, VERIFY LOCATION PRIOR TO ROUGH-IN.
26.012	WP J BOX FOR OWNER FURNISHED CAMERA SYSTEM, VERIFY EXACT REQUIREMENTS, LOCATIONS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN.
26.013	COLUMN MOUNTED 20A, SPST, WP KEY SWITCH FOR CANOPY LIGHTING DISCONNECT MEANS.
26.014	LIGHTING CIRCUIT TO BE ROUTED THROUGH CONTACTOR, SEE CONTACTOR DETAIL FOR MORE INFORMATION.
26.022	COORDINATE ALL CONDUIT REQUIREMENTS FOR AUTOMATIC GATES, SENSOR LOOPS, ETS WITHGATE MANUFACTURER'S SITE SPECIFIC INSTALLATION DRAWINGS.
26.039	PHOTOCELL(INTERMATIC #EK4736S OR APPROVED EQUAL) FOR CONTROL OF EXTERIOR LIGHTING. MOUNT AS HIGH AS POSSIBLE.
26.073	PROVIDE (1) 3/4" CONDUIT FROM VACUUM EQUIPMENT TO VACUUM EQUIPMENT CONTROL PANEL LOCATED IN MAIN BUILDING EQUIPMENT ROOM. REFER TO EQUIPMENT PLAN SHEET E112.

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/23

CHECKED BY:	JAC
DRAWN BY:	IN
DOCUMENT DATE:	01/10/23

Jaime Andres Castaneda
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Date: 2024.01.10 15:17:29-06'00'

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
PRINT NAME: JAIME A. CASTANEDA
SIGNATURE:
DATE:
LICENSE NO: 51070

ELECTRICAL SITE PLAN

SHEET: E002

1/10/2024 12:06:19 PM
C:\Users\jnya.nwaberg\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_MEP_V22_jeFA.jnya.Nwaberg.rvt
E002 ELECTRICAL SITE PLAN

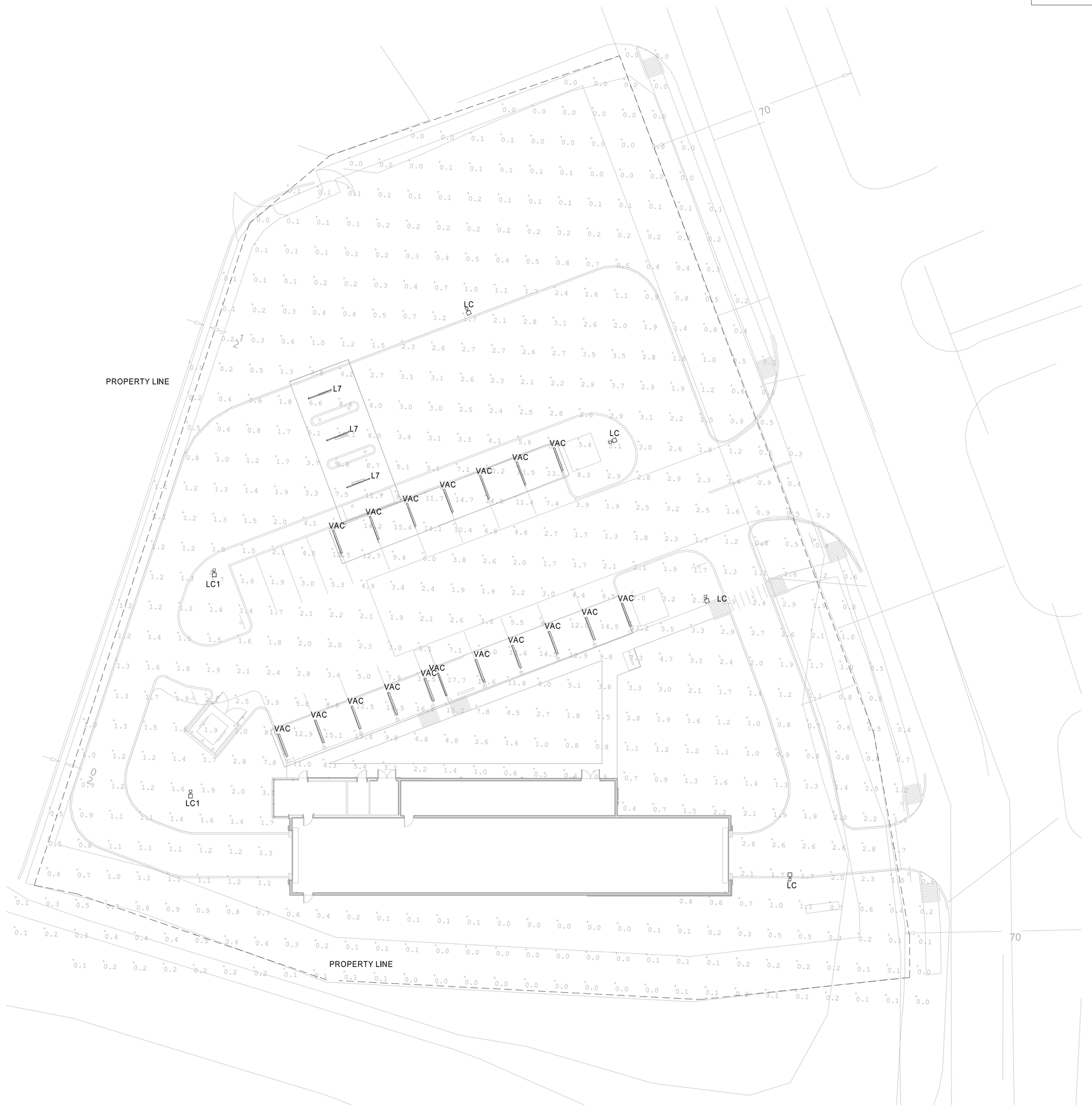
5.2D - PLAN SET

LIGHT FIXTURE SCHEDULE

TYPE MARK	MANUFACTURER	CATALOG NUMBER	VOLTAGE	WATTAGE	LAMP TYPE	MOUNTING	REMARKS
L7	COLUMBIA LIGHTING	LXEM45-50LW-RFA-EDU	277	34.0	LED	PENDANT	96" PENDANT LINEAR FIXTURE WITH 3 3/4" WIDE FROSTED LENS, UL WET LABEL
LC	HUBBELL	ASL1-160L-70-5K7-4W-UNV-7PR-TL-HSS-B	277	100.0	LED	POLE	SITE FIXTURE SHEILDED AND MOUNTED AT 20'-6" WITH 18' POLE(HAPCO-RTA-18-D-6B-4-BA) AND 2'-6" BASE
LC1	HUBBELL	ASL1-160L-70-5K7-5QW-UNV-7PR-TL-HSS-B	277	100.0	LED	POLE	SITE FIXTURE SHEILDED AND MOUNTED AT 20'-6" WITH 18' POLE(HAPCO-RTA-18-D-6B-4-BA) AND 2'-6" BASE
VAC	G&G	GPX8-SO-50K-120	120	36.0	LED	SURFACE	8' LONG FLEXIBLE LINEAR FIXTURE, UL WET LABEL

CALCULATION SUMMARY

CALC. LABEL	UNITS	AVG	MAX	MIN	AVG/MIN
SITE	FOOTCANDLES	3.68	31.3	0.3	12.27
PROPERTY LINE	FOOTCANDLES	0.3	1.2	0.0	N/A



1 SITE PHOTOMETRICS PLAN
1" = 20'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

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DOCUMENT DATE:	01/10/23

Jaime Andres Castaneda

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Date: 2024.01.10 15:17:35-06'00'

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DATE:
LICENSE NO: 51070

SITE PHOTOMETRICS PLAN PLAN

SHEET: E003

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E003-SITE PHOTOMETRICS PLAN PLAN

5.2D - PLAN SET

LIGHT FIXTURE SCHEDULE

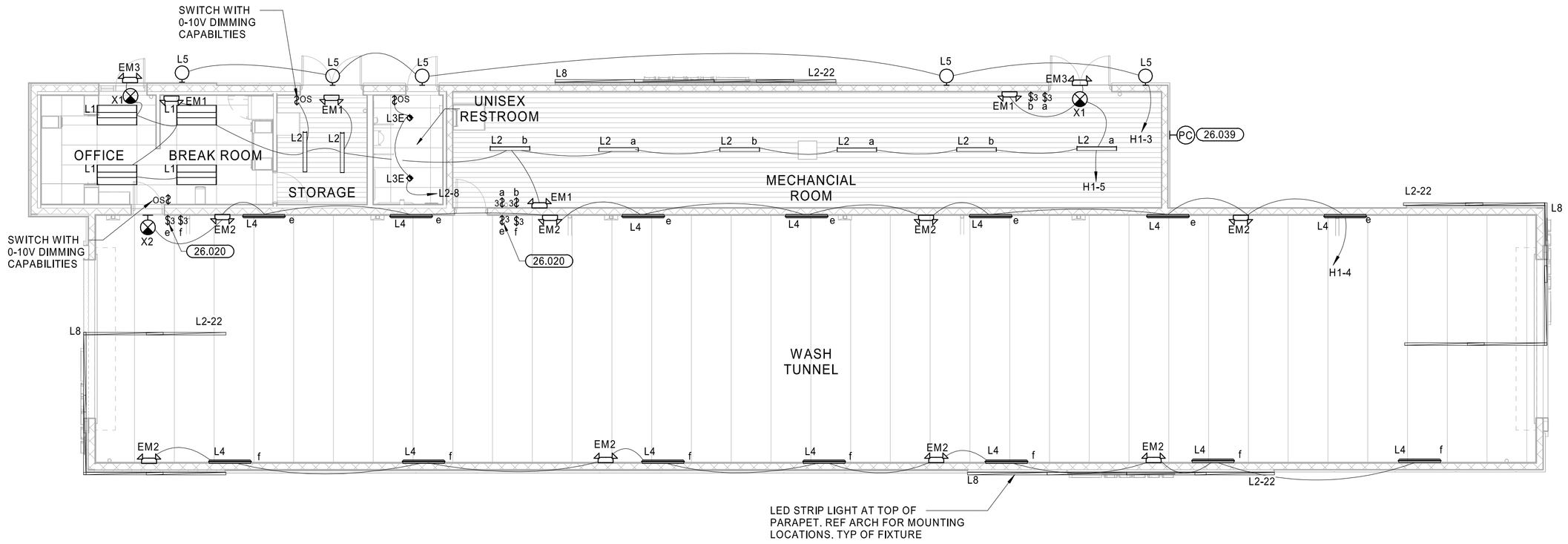
TYPE MARK	MANUFACTURER	CATALOG NUMBER	VOLTAGE	WATTAGE	LAMP TYPE	MOUNTING	REMARKS
EM1	DUAL-LITE	LZ2	277	4.0	LED	SURFACE	EMERGENCY BATTERY LIGHTING UNIT
EM2	DUAL-LITE	PGW	277	4.0	LED	SURFACE	WET LISTED EMERGENCY BATTERY LIGHTING UNIT
EM3	ARCHITECTURAL EGRESS	AEL SERIES	277	4.0	LED	SURFACE	EXTERIOR EMERGENCY SIGN WITH 90 MINUTE BATTERY BACK UP
L1	COLUMBIA LIGHTING	LCAT-24-35-LW-G-ED-U	277	35.0	LED	RECESSED	2 X 4 RECESSED TROFFER
L2	COLUMBIA LIGHTING	LCL	277	25.0	LED	PENDANT	4' LENSED STRIP LIGHT
L3E	PRESCOLITE	LC6LED-277-6LCLED-7-35K-8	120	22.0	LED	RECESSED	6" RECESSED DOWN LIGHT. PROVIDE WITH 90 MINUTE BATTERY BACK UP
L4	COLUMBIA LIGHTING	LXEM	277	47.0	LED	SURFACE	WET LOCATION 1X4 ENCLOSED & GASKETED STRIP LIGHT
L5	INDESSA LIGHTING	TPL-RGBW-O-24	277	17.0	LED	SURFACE	DECORATIVE WALL SCONCE
L8	LSI	ARCH-xxx-LED-TW-XXX-MULTI	120	60.0	LED	SURFACE	RECESSED STRIP LED LIGHT AT TOP OF PARAPET. EXACT BILL OF MATERIALS AND LIGHT FIXTURE LENGTHS TO BE DETERMINED BY MANUFACTURER BASED ON EXACT BUILDING DIMENSIONS. FIXTURE SHALL BE RATED AT 50K COLOR TEMPERATURE
X1	DUAL-LITE	EVC-URWE	277	4.0	LED	SURFACE	EXIT SIGN WITH 90 MINUTE BATTERY BACK UP
X2	DUAL-LITE	SEWL-SRWE-4X	277	4.0	LED	SURFACE	WET LISTED EMERGENCY EXIT SIGN WITH 90 MINUTE BATTERY BACK UP

GENERAL NOTES

1. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
2. THE ELECTRICAL CONTRACTOR SHALL (PRIOR TO HIS BID) a) VISIT THE SITE AND FIELD VERIFY ALL EXISTING CONDITIONS AND b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED THE CONTRACTOR AFTER THE BID IS ACCEPTED.
3. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUITS, "SEALTIGHT" TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A CODE SIZED GROUND WIRE SHALL HAVE ACODE SIZED BOND WIRE PER NEC TABLE 250.122 INSTALLED WITH THE CIRCUIT CONDUCTORS.

KEYNOTES

26.020	PROVIDE WEATHERPROOF SWITCHES AT LOCATION SHOWN.
26.039	PHOTOCELL(INTERMATIC #EK4736S OR APPROVED EQUAL) FOR CONTROL OF EXTERIOR LIGHTING. MOUNT AS HIGH AS POSSIBLE.



1 LIGHTING PLAN
1/8" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

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Jaime Andres Castaneda

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DATE:
LICENSE NO: 51070

LIGHTING PLAN

SHEET: E101

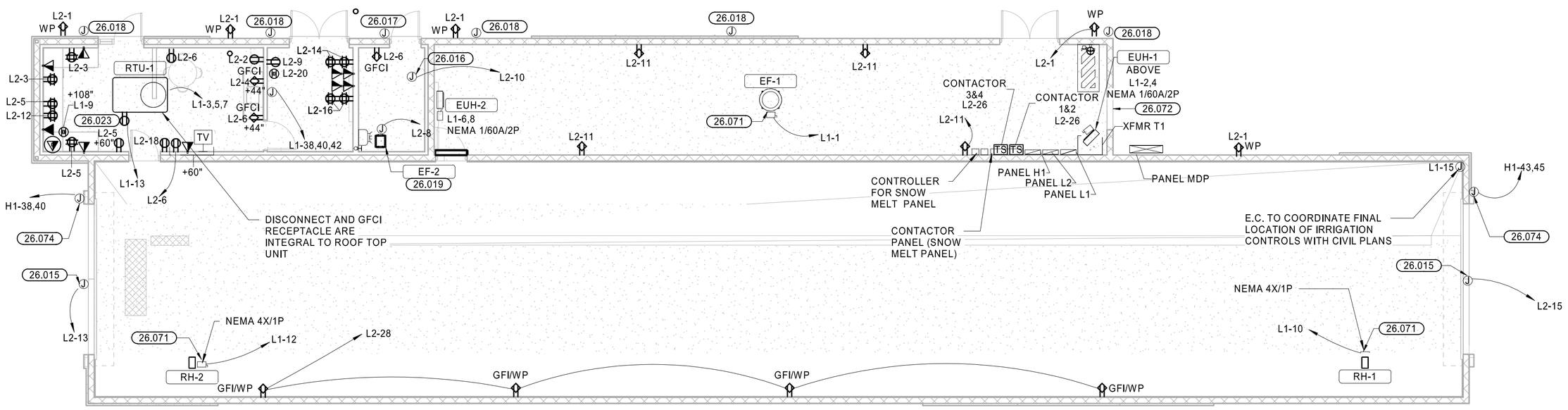
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E101-LIGHTING PLAN

5.2D - PLAN SET

GENERAL NOTES
1. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND COMPLETE CONTRACTUAL OBLIGATIONS.
2. THE ELECTRICAL CONTRACTOR SHALL (PRIOR TO HIS BID) a) VISIT THE SITE AND FIELD VERIFY ALL EXISTING CONDITIONS AND b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED THE CONTRACTOR AFTER THE BID IS ACCEPTED.
3. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUITS. "SEALTIGHT" TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A CODE SIZED GROUND WIRE SHALL HAVE ACODE SIZED BOND WIRE PER NEC TABLE 250.122 INSTALLED WITH THE CIRCUIT CONDUCTORS.
4. ALL ELECTRICAL EQUIPMENT, CONDUIT, AND DEVICES INSTALLED IN CARWASH TUNNEL SHALL BE WATER PROOF.
5. VERIFY ALL ELECTRICAL REQUIREMENTS AND LOCATIONS OF ELECTRICAL EQUIPMENT/DEVICES WITH CAR WASH EQUIPMENT INSTALLER PRIOR TO CONSTRUCTION.

KEYNOTES

26.015	JUNCTION BOX FOR EXTERIOR BUILDING SIGNANGE. COORDINATE EXACT QUANTITY AND LOCATION WITH OWNER AND SIGN COMPANY PRIOR TO CONSTRUCTION.
26.016	JUNCTION BOX FOR ELECTRIC HAND DRYER, COORDINATE EXACT LOCATION PRIOR TO ROUGH IN, VERIFY ELECTRICAL REQUIREMENTS WITH EQUIPMENT INSTALLATION INSTRUCTIONS.
26.017	JUNCTION BOX FOR KEY PAD, COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
26.018	JUNCTION BOX FOR SPEAKERS, COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
26.019	SWITCH EXHAUST FAN WITH LIGHTING.
26.023	WP/WR GFCI ROOFTOP RECEPTACLE.
26.071	MECHANICAL EQUIPMENT TO BE CONTROLLED VIA THERMOSTAT PROVIDE BY MECHANICAL CONTRACTOR. CONNECT TO THERMOSTAT PER MANUFACTURER'S INSTRUCTIONS.
26.072	LOUVER WITH ELECTRICAL ACTUATOR. INTERLOCK WITH EXHAUST FAN EF-1 OPERATION TO OPEN WHEN FAN IS ENERGIZED.
26.074	ELECTRICAL IN-SLAB SNOW MELT SYSTEM EQUAL TO WARMZONE CZ. CONNECT TO POWER CABLING TO COLD LEADS AT EACH SNOW MELT AREA. CABLING ROUTED THROUGH EXTERIOR JUNCTION BOX AND THEN TO PROPOSED SNOW MELT CONTACTOR PANEL IN EQUIPMENT ROOM BEFORE GOING TO THE BRANCH PANEL H1.GFEP MODULE IS INTERNAL TO THE CONTACTOR PANEL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS. CONTACT NATE JOHNSON AT 801-948-7558.



1 POWER PLAN
1/8" = 1'-0"

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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK		
	PERMIT	01/10/23

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DRAWN BY:	IN
DOCUMENT DATE:	01/10/23

Jaime Andres Castaneda

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Date: 2024.01.10 15:17:49-06'00'

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PRINT NAME: JAIME A. CASTANEDA
SIGNATURE:
DATE:
LICENSE NO: 51070

POWER PLAN

SHEET:
E111

1/10/2024 12:06:28 PM
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E111-POWER PLAN

5.2D - PLAN SET

Equipment Schedule

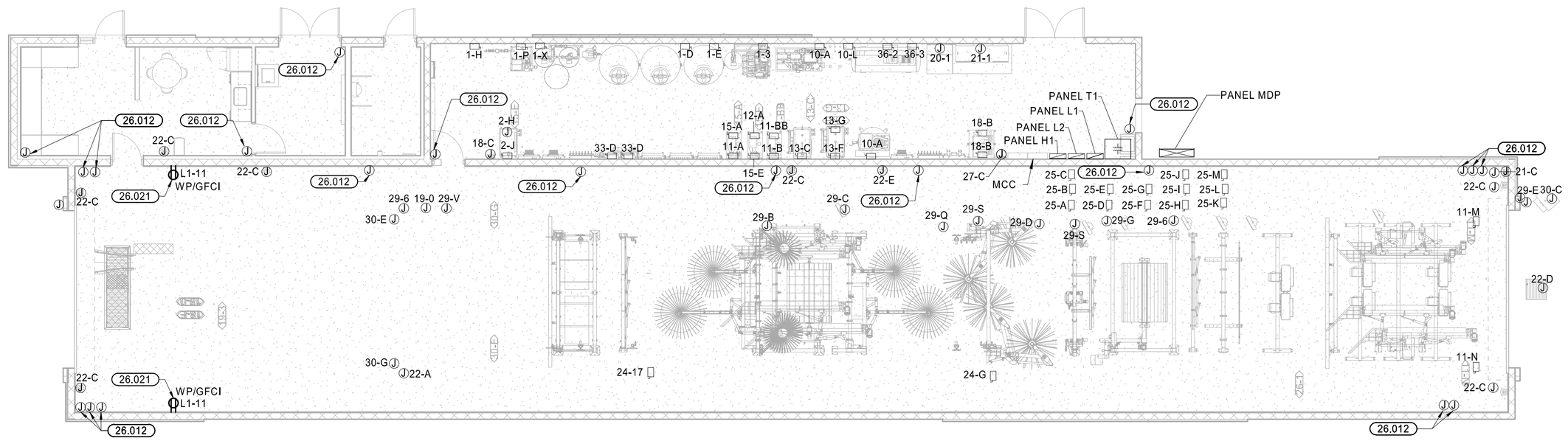
ITEM #	DESCRIPTION	VOLTAGE	LOAD	PANEL	CIRCUIT
1-3	RECLAIM PUMP	480 V	6.32 kVA	H1	32,34,36
1-D	FILTRATION SYSTEM	480 V	3.99 kVA	H1	20,22,24
1-E	REPRESS	480 V	3.99 kVA	H1	26,28,30
1-H	WATER REPRESS PUMP	480 V	6.32 kVA	H1	8,10,12
1-P	WATER SOFTENER	120 V	0.49 kVA	L2	24
1-X	R.O. REJECT PUMP	480 V	6.32 kVA	H1	14,16,18
2-H	D-10 STAND	120 V	0.30 kVA	L1	37
2-J	TIRE BRUSH	480 V	9.15 kVA	MCC	BY VENDOR
10-A	AIR COMPRESSOR	480 V	11.64 kVA	H1	31,33,35
10-A	AIR COMPRESSOR	480 V	11.64 kVA	H1	37,39,41
10-L	AIR DRYER	120 V	0.69 kVA	L1	19
11-A	TIRE BRUSH	480 V	6.40 kVA	MCC	BY VENDOR
11-B	WRAP BRUSH	480 V	9.15 kVA	MCC	BY VENDOR
11-BB	WRAP BRUSH	480 V	9.15 kVA	MCC	BY VENDOR
11-M	TIRE DRESSING	480 V	1.37 kVA	MCC	BY VENDOR
11-N	TIRE DRESSING	480 V	1.37 kVA	MCC	BY VENDOR
12-A	OMNI POWER	480 V	6.32 kVA	MCC	BY VENDOR
13-C	H-25 OMNI PUMP	480 V	17.46 kVA	MCC	BY VENDOR
13-F	H-25 OMNI PUMP	480 V	17.46 kVA	MCC	BY VENDOR
13-G	H-25 OMNI PUMP SIDE #2	480 V	17.46 kVA	MCC	BY VENDOR
15-A	SIDE BRUSH	480 V	6.48 kVA	MCC	BY VENDOR
15-E	COMBINATION POWER	480 V	9.15 kVA	MCC	BY VENDOR
18-B	CONVEYOR UNIT	480 V	11.64 kVA	MCC	BY VENDOR
18-B	CONVEYOR UNIT	480 V	11.64 kVA	MCC	BY VENDOR
18-C	CONVEYOR AIR SOL.	24 V	0.00 kVA		
19-0	EYE CONTROL STATION	24 V	0.00 kVA		
20-1	MCC CONTROL CIRC.	24 V	0.00 kVA		
21-C	ANTI-COLLISION CONTROL BOX	24 V	0.00 kVA		
22-A	ELECTRICAL EYE SENSORS	24 V	0.00 kVA		
22-C	EMERGENCY STOP	24 V	0.00 kVA		
22-D	ANIT-COLLISION PAD	24 V	0.30 kVA		
22-E	WARNING HORN	24 V	0.00 kVA		
24-17	DCW TOP BRUSH/MOTOR	480 V	2.82 kVA	MCC	BY VENDOR
24-G	TOP BRUSH	480 V	1.41 kVA	MCC	BY VENDOR
25-A	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-B	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-C	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-D	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-E	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-F	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-G	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-H	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-I	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-J	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-K	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-L	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
25-M	BLOWER MOTOR	480 V	14.13 kVA	MCC	BY VENDOR
27-C	CONVEYOR HECO CONTROLLER	120 V	0.01 kVA	L1	35
29-6	GALAXY ARCH SIGN	120 V	0.30 kVA	L1	25
29-6	GALAXY ARCH SIGN	120 V	0.00 kVA	L1	27
29-B	UNDER CARRIAGE SIGN	120 V	0.30 kVA	L2	17
29-C	COLOR FOAMER SIGN	120 V	0.30 kVA	L2	19
29-D	SEALER WAX SIGN	120 V	0.30 kVA	L2	21
29-E	TIRE SEAL SIGN	120 V	0.30 kVA	L1	23
29-G	SPOT FREE SIGN	120 V	0.30 kVA	L2	23
29-Q	FUSION WAX SIGN	120 V	0.30 kVA	L2	25
29-S	FUSION CERAMIC SIGN	120 V	0.30 kVA	L2	29
29-S	FUSION CERAMIC SIGN	120 V	0.30 kVA	L2	27
29-V	ARCADE PANEL	120 V	0.30 kVA	L1	33
30-C	INSTRUCTIONAL SIGN	120 V	0.00 kVA	L1	21
30-E	INSTRUCTIONAL CABINET	120 V	0.30 kVA	L1	31
30-G	PKG. RECEIVED SIGN	120 V	0.30 kVA	L1	29
33-D	GRUNDFOS PUMP	480 V	6.32 kVA	H1	13,15,17
33-D	GRUNDFOS PUMP	480 V	6.32 kVA	H1	7,9,11
36-2	AUTOVAC IQ PANEL	480 V	46.00 kVA	H1	25,27,29
36-3	AUTOVAC IQ PANEL	480 V	30.00 kVA	H1	19,21,23

GENERAL NOTES

1. VERIFY EXACT VOLTAGE, PHASE, FLA/H.P. AND LOCATION WITH OWNER PRIOR TO ROUGH IN.
2. CONTRACTOR SHALL VERIFY EXACT MOUNTING OF EQUIPMENT WITH OWNER PRIOR TO ROUGH-IN
3. CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT.
4. ALL 120V RECEPTACLES LOCATED WITHIN WET LOCATIONS SHALL BE WEATHERPROOF GFCI RATED.
5. REFER TO SONNY'S CARWASH EQUIPMENT FACTORY INSTALLATION DRAWINGS FOR ADDITIONAL INFORMATION.
6. ALL DISCONNECT SWITCHES FEEDING NEW EQUIPMENT REQUIRE A MINIMUM WORKING SPACE. BUILDING INSPECTORS WILL VERIFY DURING INSPECTION MINIMUM WORKING SPACE FOR DISCONNECT SWITCHES MEETS NEC 110.26(A)(1).
7. EXPOSED CONDUIT, PIPING, ETC. SHALL NOT BE ALLOWED WITHIN THE CAR WASH TUNNEL WITHOUT THE APPROVAL OF THE OWNER, ALL CONDUIT, PIPING, ETC. SHALL BE CONCEALED INSIDE THE WALLS, FLOORS AND CEILING OF TUNNEL.
8. ALL ELECTRICAL EQUIPMENT, CONDUIT, AND DEVICES INSTALLED IN CARWASH TUNNEL SHALL BE WATER PROOF.

KEYNOTES

26.012	WP J BOX FOR OWNER FURNISHED CAMERA SYSTEM, VERIFY EXACT REQUIREMENTS, LOCATIONS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN.
26.021	RECEPTACLE FOR SECURITY SYSTEM VIEWING STATION. COORDINATE EXACT LOCATION AND ELEVATION PRIOR TO ROUGH-IN.



1 EQUIPMENT PLAN
1/8" = 1'-0"

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TRUE BLUE CAR WASH

8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443

JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/23

CHECKED BY:	JAC
DRAWN BY:	IN
DOCUMENT DATE:	01/10/23

Jaime Andres Castaneda

Digitally signed by Jaime Andres Castaneda
DN: E=jaime.castaneda@hfa-ae.com, CN=Jaime Andres Castaneda, O=Harrison French & Associates, L=Bentonville, S=ARKANSAS, C=US
ALTNAME=NJAAS20070870405
Reason:
Date: 2024.01.10 15:17:55-06'00'

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
PRINT NAME: JAIME A. CASTANEDA
SIGNATURE:
DATE:
LICENSE NO: 51070

EQUIPMENT PLAN

SHEET:
E112

1/10/2024 12:06:32 PM
C:\Users\jma.newberg\Documents\2023 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_MEP_V22_HFA jma.Newberg.rvt
E112-EQUIPMENT PLAN

5.2D - PLAN SET

MCC — MOTOR CONTROL CENTER

480/277 Wye,3PH,4W

600 A MLO

LOCATION:
SUPPLY FROM: MDP
SERVES: MOTORS

CKT	LOAD SERVED	LOAD TYPE	HP	O.C. TYPE	BREAKER SIZE	POLES	WIRES & CONDUIT SIZE	DISCONNECT SWITCH AND/OR STARTER	A	B	C
1	TIRE BRUSH - #2-J	MT	7.5HP	CB	20 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	3.05	3.05	3.05
2	TIRE BRUSH - #11-A	MT	5HP	CB	15 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	2.13	2.13	2.13
3	WRAP BRUSH- #11-BB	MT	7.5HP	CB	20 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	3.05	3.05	3.05
4	WRAP BRUSH- #11-BB	MT	7.5HP	CB	20 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	3.05	3.05	3.05
5	TIRE DRESSING - #11-M & #11-N	MT	1HP	CB	15 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	0.91	0.91	0.91
6	OMNI POWER - #12-A	MT	5HP	CB	20 A	3	3#12, #12G, 1/2"C	DISC 30A/3PH/NF/NEMA 4	2.11	2.11	2.11
7	H-25 OMNI PUMP - #13-C	MT	15HP	CB	40 A	3	3#8, #8G, 1"C	DISC 60A/3PH/NF/NEMA 4	5.82	5.82	5.82
8	H-25 OMNI PUMP - #13-F	MT	15HP	CB	40 A	3	3#8, #8G, 1"C	DISC 60A/3PH/NF/NEMA 4	5.82	5.82	5.82
9	H-25 OMNI PUMP SIDE #2 -...	MT	15HP	CB	40 A	3	3#8, #8G, 1"C	DISC 60A/3PH/NF/NEMA 4	5.82	5.82	5.82
10	SIDE BRUSH - #15-A	MT	5HP	CB	15 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	2.16	2.16	2.16
11	COMBINATION POWER - #15-E	MT	7.5HP	CB	20 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	3.05	3.05	3.05
12	CONVEYOR UNIT - #18-B	MT	10HP	CB	25 A	3	3#10, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	3.88	3.88	3.88
13	CONVEYOR UNIT - #18-B	MT	10HP	CB	25 A	3	3#10, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	3.88	3.88	3.88
14	DCW TOP BRUSH/MOTOR -...	MT	1HP	CB	15 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	0.94	0.94	0.94
15	TOP BRUSH - #24-G	MT	1HP	CB	15 A	3	3#12, #12G, 3/4"C	DISC 30A/3PH/NF/NEMA 4	0.47	0.47	0.47
16	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
17	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
18	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
19	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
20	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
21	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
22	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
23	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
24	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
25	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
26	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
27	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
28	BLOWER MOTOR - #25-B	MT	15HP	CB	40 A	3	3#10, #10G, 1"C	DISC 60A/3PH/NF/NEMA 4	4.71	4.71	4.71
								TOTAL CONNECTED KVA:	107.37 kVA	107.37 kVA	107.37 kVA
								TOTAL CONNECTED AMPS:	387.63 A	387.63 A	387.63 A

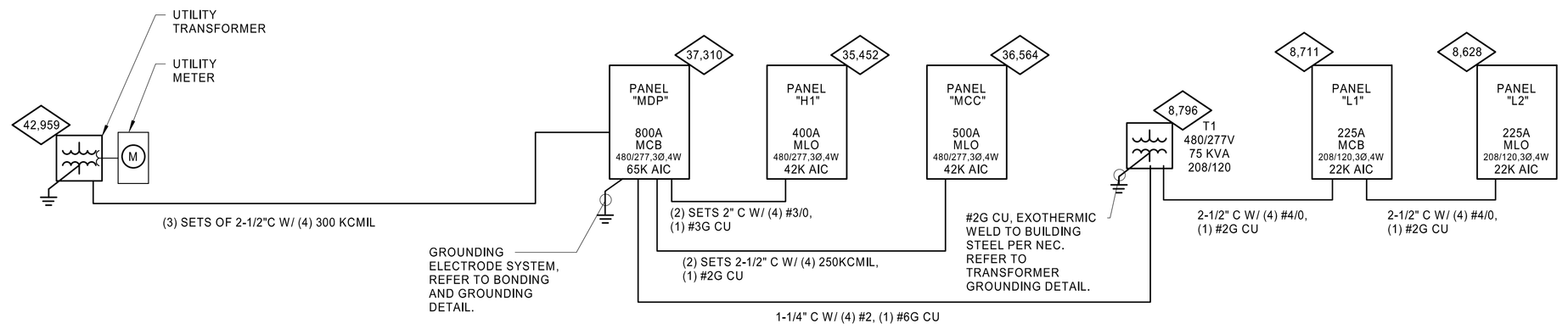
PER NEC ARTICLE 220

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	TOTAL DEMAND	PANEL TOTALS
CONTINUOUS	0.00 kVA			
NON-CONTINUOUS	0.00 kVA			**TOTAL CONN. LOAD:** 322.12 kVA
MOTORS	322.12 kVA	100.00%	322.12 kVA	**TOTAL DEMAND LOAD:** 322.12 kVA
NON COINCIDENTAL	0.00 kVA			**TOTAL CONN. CURRENT:** 387.45 A
				TOTAL DEMAND CURRENT: 387 A

FAULT CALCULATIONS

SOURCE	DESTINATION	TRANSFORMER (T) / FEEDER (F)	WIRE SIZE / BUS SIZE	CONDUCTOR TYPE	WIRE CONF / BUSWAY (3SC) / (3CG) / (BD)	CONDUIT / BUS TYPE	WIRE LENGTH (FT)	WIRES PER PHASE (IF PARALLELED)	PHASE (1 / 3)	VOLTAGE (L-L) SECONDARY	VOLTAGE (L-N) SECONDARY	XFRMR SIZE	PRIMARY VOLTAGE	SECONDARY VOLTAGE	%Z	AIC @ SOURCE	AIC @ DESTINATION
UTIL-P	*UTIL-S*	T	[redacted]						3	—	—	*750*	—	480	2	——	*45106.813*
UTIL-S	*MDP*	F	300	COPPER	3SC	RIGID	70	3	3	480	277	—	—	—	--	45106.81293	*37310.95926*
MDP	*H1*	F	3/0	COPPER	3SC	RIGID	10	2	3	480	277	—	—	—	--	37310.95926	*35452.74229*
MDP	*MCC*	F	250	COPPER	3SC	RIGID	10	4	3	480	277	—	—	—	--	37310.95926	*36564.33096*
MDP	*T1*	F	2	COPPER	3SC	RIGID	10	1	3	208	120	—	—	—	--	37310.95926	*24449.3591*
T1	*T1S*	T	—	——	--	—	--	--	3	—	—	75	480	208	2	24449.3591	*8796.541418*
T1S	*L1*	F	4/0	COPPER	3SC	RIGID	2	1	3	208	120	—	—	—	--	8796.541418	*8711.919779*
L1	*L2*	F	4/0	COPPER	3SC	RIGID	2	1	3	208	120	—	—	—	--	8711.919779	*8628.910727*
---	---	--	--	——	--	—	--	--	--	—	—	—	—	—	--	——	-----

XX.XXX — REPRESENTS THE AVAILABLE FAULT CURRENT IN RMS SYMMETRICAL AMPS AT THE RESPECTIVE TRANSFORMER, PANELBOARD, OR EQUIPMENT.



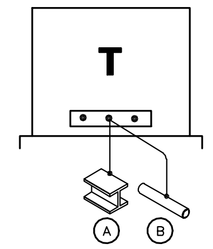
1 ONE LINE DIAGRAM

TRANSFORMER GROUND DETAIL

GROUND SIZE CHART
SEE NOTE 6 FOR GEC SIZING.

TRANSFORMER SIZE (kVA)	GEC SIZE (Cu.)
75kVA	#2

GROUNDING DIAGRAM



KEY NOTES - GROUNDING DIAGRAM
WHEN PRESENT AT BUILDING OR STRUCTURE, THE NEAREST OF ONE OF THE FOLLOWING GROUNDING ELECTRODES, AS DEFINED BY 250.52(A)(1),(2), SHALL BE USED AS THE TRANSFORMER GROUND. SEE NOTE 5. BELOW FOR BONDING NOTE. (ADDITIONAL TO GROUNDING REQUIREMENTS OF SEPARATELY DERIVED SYSTEM PER NEC 250.30)

(A) METAL FRAME OF BUILDING OR STRUCTURE. REFER TO CHART FOR MINIMUM GROUNDING ELECTRODE CONDUCTOR SIZE.
(B) METAL UNDERGROUND WATER PIPE. REFER TO CHART FOR MINIMUM GROUNDING ELECTRODE CONDUCTOR SIZE.

GENERAL NOTES - GROUNDING DIAGRAM

1. ANY OF THE OTHER ELECTRODES IDENTIFIED IN NEC 250.52(A) SHALL BE USED IF THE ELECTRODES SPECIFIED ABOVE ARE NOT AVAILABLE.
2. THIS DETAIL IS PROVIDED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE ARTICLES 250 AND 450 PERTAINING TO THE "GROUNDING ELECTRODE SYSTEM".
3. ANY VARIANCE FROM THIS DRAWING AND/OR SPECIFICATION MUST BE REQUESTED AND APPROVED IN WRITING PRIOR TO INSTALLATION.
4. ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF ARTICLE 250 AND 450 (ALL SUBPARAGRAPHS) OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODE REQUIREMENTS.
5. WHEN ITEMS A AND B ABOVE CANNOT BE USED AS A GROUNDING ELECTRODE, PROVIDE BONDING OF SEPARATELY DERIVED SYSTEMS TO PIPING SYSTEMS AND EXPOSED STRUCTURAL STEEL PER NEC 250.104 IN ADDITION TO GROUNDING REQUIREMENTS.
6. GEC SIZED PER NEC 250.66 BASED ON SECONDARY CONDUCTORS OF TRANSFORMER (SEPARATELY DERIVED SYSTEM 250.30)

BONDING & GROUND DETAIL

KEY NOTES - GROUNDING DIAGRAM

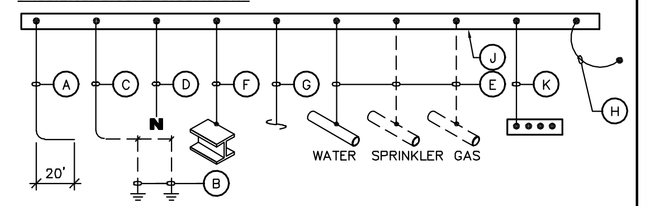
(A) CONCRETE ENCASED ELECTRODE (UFER) (GROUNDING ELECTRODE #1). REFER TO CHART FOR SIZE. MINIMUM 20'.
(B) MINIMUM 10 MIL ANNEALED COPPER CLAD STEEL GROUND ROD. (GROUNDING ELECTRODE #2). REFER TO CHART FOR SIZE. GROUND RODS ARE NOT OPTIONAL, MUST BE INSTALLED.
(C) GROUNDING ELECTRODE CONDUCTOR. REFER TO CHART FOR SIZE.
(D) INTEGRATED (FACTORY BONDED) BUS BAR MAIN BONDING JUMPER. REFER TO CHART FOR MINIMUM CONDUCTOR SIZE. (AMPACITY SHALL BE 150% RATED)
(E) METALLIC PIPING BOND WIRE, REFER TO CHART FOR MINIMUM SIZE. BOND TO ALL METALLIC PIPING (WATER, SPRINKLER, GAS, PNEUMATIC LINES, ETC.) WITHIN THE FIRST ACCESSIBLE 5' OF PIPES ENTRY INTO BUILDING.
(F) BUILDING STEEL BOND WIRE (IF REQUIRED PER BUILDING CONSTRUCTION TYPE). REFER TO CHART FOR MINIMUM SIZE.
(G) BOND WIRE FOR USE WITH MULTIPLE SERVICE's (WHEN PRESENT). REFER TO CHART FOR MINIMUM SIZE.
(H) INTEGRATED (FACTORY BONDED) BUS BAR CASE BOND. REFER TO CHART FOR MINIMUM CONDUCTOR SIZE.
(J) INTEGRATED (FACTORY INSTALLED) GROUND BUS BAR. SHALL BE SIZED TO ACCOMMODATE GROUND WIRE LUGS AS INDICATED ON THE ONE-LINE DIAGRAM.
(K) INTERSYSTEM BONDING TERMINATION BAR AT SERVICE EQUIPMENT, W/ MIN. 3 POINTS OF CONNECTION FOR OTHER SYSTEMS. CONDUCTOR SHALL BE MIN. #6 CU, UNLESS SPECIFIED ELSEWHERE. INSTALL PER NEC 250.94.

CONDUCTOR SIZE CHART

	SES AMPACITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	200 AMP	#4	5/8" x 10' (x2)	#4	#2	#2	#2		#2
	400 AMP	#4	5/8" x 10' (x2)	#4	#1/0	#1/0	#1/0		#1/0
	600 AMP	#4	5/8" x 10' (x2)	#4	#3/0	#3/0	#3/0		#3/0
	800 AMP	#4	5/8" x 10' (x2)	#4	#3/0	#3/0	#3/0		#3/0
*	1000 AMP	#4	5/8" x 10' (x2)	#4	#4/0	#3/0	#3/0		#4/0
	1200 AMP	#4	5/8" x 10' (x2)	#4	#4/0	#3/0	#3/0		#4/0
	1600 AMP	#4	5/8" x 10' (x2)	#4	#300	#3/0	#3/0		#300
	2000 AMP	#4	5/8" x 10' (x2)	#4	#350	#3/0	#3/0		#350
	2500 AMP	#4	5/8" x 10' (x2)	#4	#500	#3/0	#3/0		#500
	3000 AMP	#4	5/8" x 10' (x2)	#4	#500	#3/0	#3/0		#500
	3600 AMP	#4	5/8" x 10' (x2)	#4	#700	#3/0	#3/0		#700

ALL SIZES SHOWN ARE FOR COPPER CONDUCTORS. ALUMINUM IS NOT PERMITTED.

GROUNDING DIAGRAM



GENERAL NOTES - GROUNDING DIAGRAM

1. THIS DETAIL IS PROVIDED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE ARTICLE 250 PERTAINING TO THE "GROUNDING ELECTRODE SYSTEM".
2. SPLICING OF CONDUCTORS SHALL BE ACCOMPLISHED VIA EXOTHERMIC WELD (CAD WELD) ONLY.
3. ALL CONNECTIONS TO GROUND RODS BELOW GRADE OR IN CONCRETE SHALL BE MADE VIA EXOTHERMIC WELD (CAD WELD) ONLY. CONNECTIONS MADE ABOVE GROUND LEVEL CAN BE ACCOMPLISHED UTILIZING A U.L. LISTED MECHANICAL CLAMP SUITABLE FOR THE PURPOSE.
4. ANY VARIANCE FROM THIS DRAWING AND/OR SPECIFICATION MUST BE REQUESTED AND APPROVED IN WRITING PRIOR TO INSTALLATION.
5. ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF ARTICLE 250 (ALL SUBPARAGRAPHS) OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODE REQUIREMENTS.
6. THE GROUNDING SYSTEM SHALL PROVIDE NO GREATER THAN (5) FIVE OHMS RESISTANCE TO GROUND AT THE SERVICE CONNECTION. THE RESULTS SHALL BE VERIFIED BY AN INDEPENDENT TESTING AGENCY VIA GROUND TEST (FALL-OF-POTENTIAL) AND SUBMITTED IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS CONTAINED HEREIN.
7. THE GROUNDING ELECTRODE SYSTEM SHALL CONSIST OF GROUNDING ELECTRODES, ITEMS A (CONCRETE-ENCASED ELECTRODE (A.K.A. UFER), AND GROUND ROD(S) ITEM B. METAL UNDERGROUND WATER PIPE WITH 10' IN CONTACT WITH EARTH, AS DEFINED IN NEC 250.52(A)(1) AND METAL IN-GROUND SUPPORT STRUCTURE IN CONTACT WITH EARTH AS DEFINED IN 2017 NEC 250.52(A)(2) SHALL BE BONDED WITH ITEMS A & B AS PART OF THE GROUNDING ELECTRODE SYSTEM.
8. GROUNDING ELECTRODE CONDUCTORS - ITEMS: A AND C. ((F) CONNECTION TO METAL FRAME AND (E) CONNECTION TO UNDERGROUND WATER PIPE, WHEN CONSIDERED A GROUNDING ELECTRODE), SHALL EACH BE MADE IN SEPARATE CONDUCTORS AND SUITABLY PROTECTED BY CONDUIT WHERE EXPOSED TO DAMAGE OR THEFT. CONDUITS THAT ARE NOT CONTINOUS FROM GROUNDING ELECTRODE TO CABINET/ENCLOSURE SHALL BE BONDED TO THE GEC PER NEC 250.64(E).
9. EXPOSED STRUCTURAL METAL AND METAL PIPING (NOT CONSIDERED A GROUNDING ELECTRODE) SHALL BE BONDED TO THE GROUNDING ELECTRODE SYSTEM AS INDICATED ON DETAIL. CONNECTIONS E AND F, IN ACCORDANCE WITH BONDING REQUIREMENT IN ARTICLE 250 PART V.

HFA
HFA-AE, L T D.
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1705 S. Walton Blvd., Suite 3
Bentonville, Arkansas 72712
www.hfa-ae.com

STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR USE ON THE PROJECT AS DESCRIBED HEREIN. IT IS ISSUE DATE ON 3/10/23, AND IT IS NOT TO BE USED FOR ANY OTHER PROJECT, EXTENSIONS TO THIS PROJECT OR AT A LATER TIME WITHOUT THE EXPRESS WRITTEN CONSENT OF ESTES DESIGN AND ENGINEERING, INC. OR EXAMPLE ON ANOTHER PROJECT. REPRODUCTION OF THIS DRAWING FOR ANY PURPOSE WHATSOEVER BY ANY PARTY EXCEPTED AND SPECIFIED AND ENGINEERS, AND WHERE SUCH REUSE IS AUTHORIZED AND MAY BE CONTRARY TO LAW.

TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/23

CHECKED BY: JAC
DRAWN BY: IN
DOCUMENT DATE: 01/10/23

Jaime Andres Castaneda

Digitally signed by Jaime Andres Castaneda
DN: E=jaime.castaneda@hfa-ae.com, CN=Jaime Andres Castaneda, OU=Electrical Project and Associates, L=Bentonville, S=ARKANSAS, C=US, SERIALNUMBER=AAS0220701087405
Reason:
Date: 2024.01.10 15:18:02-06'00'

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
PRINT NAME: JAIME A. CASTANEDA
SIGNATURE:
DATE:
LICENSE NO: 51070

ELECTRICAL SCHEDULES AND ONE-LINE DIAGRAM

SHEET: E601

1/10/2024 12:06:33 PM
C:\Users\jima.rawberg\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_MEP - V22_HFA Jima.Rawberg.rvt
E601-ELECTRICAL SCHEDULES AND ONE-LINE DIAGRAM

5.2D - PLAN SET

MDP — SWITCHBOARD

480/277 Wye,3PH,4W
800 A MCB
FULLY RATED, 65K AIC
SURFACE, NEMA 3R

LOCATION: EXTERIOR
SUPPLY FROM: UTILITY
SERVES: DISTRIBUTION

CKT	LOAD SERVED	WIRE	BREAKER SIZE	POLES	A	B	C
1	PANEL H1	(2)3/0	400 A	3	52.95	52.35	46.69
2	PANEL L1 VIA XFMER T1	2	100 A	3	15.93	13.57	12.77
3	MCC	(2)250	500 A	3	107.37	107.37	107.37
4	SPACE		--	1	--		
5	SPACE		--	1	--		
6	SPACE		--	1	--		
7	SPACE		--	1	--		
8	SPACE		--	1	--		
			TOTAL CONNECTED KVA:		176.25 kVA	173.29 kVA	166.83 kVA
			TOTAL CONNECTED AMPS:		639.88 A	629.20 A	602.29 A

PER NEC ARTICLE 220

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	TOTAL DEMAND	PANEL TOTALS	
CONTINUOUS	5.00 kVA	125.00%	6.25 kVA		
NON-CONTINUOUS	156.37 kVA	100.00%	156.37 kVA	**TOTAL CONN. LOAD:**	**516.38 kVA**
LIGHTING	2.91 kVA	125.00%	3.63 kVA	**TOTAL DEMAND LOAD:**	**519.82 kVA**
RECEPTACLES	12.16 kVA	91.12%	11.08 kVA	**TOTAL CONN. CURRENT:**	**621.10 A**
MOTORS	329.38 kVA	100.00%	329.38 kVA	**TOTAL DEMAND CURRENT:**	**625 A**
KITCHEN	0.00 kVA				
REFRIGERATION	0.00 kVA				
HVAC COOL	0.00 kVA	100.00%	0.00 kVA		
HVAC HEAT	0.00 kVA	0.00%	0.00 kVA		

H1 — PANELBOARD

480/277 Wye,3PH,4W
400 A
MLO
FULLY RATED
42K AIC
SURFACE, TYPE 1

LOCATION: Mechanical Room
SUPPLY FROM: MDP
UPSTREAM OCPD: 400 A
SERVES: Lighting & Appliances

CKT	Circuit Description	Wire	Trip	Poles	A		B		C		Poles	Trip	Wire	Circuit Description	CKT
1	LTG - SITE POLES(6,11)	8	20 A	1	0.60	0.10					1	20 A	10	LTG - PAY STATION(6,11)	2
3	LTG - EXTERIOR(11)	12	20 A	1			0.09	0.02			1	20 A	12	LTG - TUNNEL(11)	4
5	LTG - INTERIOR(11)	12	20 A	1					0.39	0.02	1	20 A	12	LTG - TUNNEL(11)	6
7	GRUNDFOS PUMP #1	10	15 A	3	2.11	2.11					3	15 A	10	WATER REPRESSURIZATION	8
9	--	--	--	--			2.11	2.11			--	--	--	--	10
11	--	--	--	--					2.11	2.11	--	--	--	--	12
13	GRUNDFOS PUMP #2	10	15 A	3	2.11	2.11					3	15 A	10	R.O. REJECT PUMP	14
15	--	--	--	--			2.11	2.11			--	--	--	--	16
17	--	--	--	--					2.11	2.11	--	--	--	--	18
19	AUTOVAC IQ PANEL - #36-3	8	50 A	3	10.00	1.33					3	15 A	12	R.O. FILTARTION SYSTEM	20
21	--	--	--	--			10.00	1.33			--	--	--	--	22
23	--	--	--	--					10.00	1.33	--	--	--	--	24
25	AUTOVAC IQ PANEL - #36-2	2	80 A	3	15.33	1.33					3	15 A	12	R.O. REPRESSURIZER	26
27	--	--	--	--			15.33	1.33			--	--	--	--	28
29	--	--	--	--					15.33	1.33	--	--	--	--	30
31	AIR COMPRESSOR 10HP	10	25 A	3	3.88	2.11					3	15 A	10	RECLAIM PUMP STATION	32
33	--	--	--	--			3.88	2.11			--	--	--	--	34
35	--	--	--	--					3.88	2.11	--	--	--	--	36
37	AIR COMPRESSOR 15HP	6	45 A	3	3.88	2.98					2	20 A		HEATED PAD CONTACTOR	38
39	--	--	--	--			3.88	2.98			--	--	--	--	40
41	--	--	--	--					3.88						42
43	HEATED PAD CONTACTOR		20 A	2	2.98	--					1	--		SPACE	44
45	--	--	--	--			2.98	--			1	--		SPACE	46
47	SPACE		--	1					--	--	1	--		SPACE	48
49	SPACE		--	1	--	--					1	--		SPACE	50
51	SPACE		--	1			--	--			1	--		SPACE	52
53	SPACE		--	1					--	--	1	--		SPACE	54
			TOTAL CONNECTED KVA:		52.95 kVA		52.35 kVA		46.69 kVA						
			TOTAL CONNECTED AMPS:		194.30 A		192.14 A		168.57 A						

PER NEC ARTICLE 220

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	TOTAL DEMAND	PANEL TOTALS	
CONTINUOUS	0.00 kVA				
NON-CONTINUOUS	150.78 kVA	100.00%	150.78 kVA	**TOTAL CONN. LOAD:**	**152.00 kVA**
LIGHTING	1.02 kVA	125.00%	1.27 kVA	**TOTAL DEMAND LOAD:**	**152.30 kVA**
RECEPTACLES	0.00 kVA			**TOTAL CONN. CURRENT:**	**183 A**
MOTORS	0.00 kVA	Not Computed	0.00 kVA	**TOTAL DEMAND CURRENT:**	**183 A**
KITCHEN	0.00 kVA				
REFRIGERATION	0.00 kVA				
HVAC COOL	0.00 kVA	100.00%	0.00 kVA		
HVAC HEAT	0.00 kVA	0.00%	0.00 kVA		

L1 — PANELBOARD

208/120 Wye,3PH,4W
225 A
MCB
SURFACE, TYPE 1

LOCATION: Mechanical Room
SUPPLY FROM: MDP VIA T1
UPSTREAM OCPD: 225 A
SERVES: LIGHTING & APPLIANCES

SERIES RATED
22K AIC

2-SECTION PANEL, SECTION 1 OF 2

FEED THRU LUGS

CKT	Circuit Description	Wire	Trip	Poles	A		B		C		Poles	Trip	Wire	Circuit Description	CKT
1	EF-1	12	20 A	1	0.18	2.50					2	35 A	8	EHU-1	2
3	RTU-1	10	25 A	3			2.16	2.50			--	--	--	--	4
5	--	--	--	--					2.16	2.50	2	35 A	8	EHU-2	6
7	--	--	--	--	2.16	2.50					--	--	--	--	8
9	SECURITY MONITOR	12	20 A	1			0.18	0.18			1	20 A	12	RH-1	10
11	SECURITY DEVICES	12	20 A	1					0.36	0.18	1	20 A	12	RH-2	12
13	ROOFTOP RECEPTACLE	12	20 A	1	0.18	0.14					1	20 A	10	MENU SIGN #1	14
15	IRRIGATION CONTROLLER(2)	12	20 A	1			0.50	0.96			1	20 A	10	PAY STATION #1	16
17	CONTROLS TO SNOW MELT PANEL	12	20 A	1					0.18	0.14	1	20 A	10	PAY STATION HEATER #1	18
19	AIR DRYER - #10-L	12	15 A	1	0.69	0.14					1	20 A	10	GATE #1	20
21	INSTRUCTIONAL SIGN - #30-C	12	20 A	1			0.00	0.14			1	20 A	10	MENU SIGN #2	22
23	TIRE SEAL SIGN - #29-E	12	20 A	1					0.30	0.96	1	20 A	10	PAY STATION #2	24
25	GALAXY ARCH - #29-6	12	20 A	1	0.30	0.14					1	20 A	10	PAY STATION HEATER #2	26
27	GALAXY ARCH - #29-6	12	20 A	1			0.00	0.14			1	20 A	10	GATE #2	28
29	PKG. RECEIVED SIGN - #30-G	12	20 A	1					0.30	0.14	1	20 A	10	MENU SIGN #3	30
31	ENTR. INSTR. CABINET - #30-E	12	20 A	1	0.30	0.96					1	20 A	10	PAY STATION #3	32
33	ARCADE PANEL - #29-V	12	20 A	1			0.30	0.14			1	20 A	10	PAY STATION HEATER #3	34
35	CONVEYOR HECO CONTROLLER	12	20 A	1					0.01	0.14	1	20 A	10	GATE #3	36
37	D-10 STAND - #2-H	12	20 A	1	0.30	1.67					3	35 A	8	WATER HEATER(2)	38
39	SPARE		--	1			--	1.67			--	--	--	--	40
41	SPARE		--	1					--	1.67	--	--	--	--	42
			TOTAL CONNECTED KVA:		15.93 kVA		13.57 kVA		12.77 kVA						
			TOTAL CONNECTED AMPS:		133.76 A		114.08 A		106.39 A						

PER NEC ARTICLE 220

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	TOTAL DEMAND	PANEL TOTALS	
CONTINUOUS	5.00 kVA	125.00%	6.25 kVA		
NON-CONTINUOUS	5.59 kVA	100.00%	5.59 kVA	**TOTAL CONN. LOAD:**	**42.26 kVA**
LIGHTING	1.89 kVA	125.00%	2.37 kVA	**TOTAL DEMAND LOAD:**	**45.41 kVA**
RECEPTACLES	12.16 kVA	91.12%	11.08 kVA	**TOTAL CONN. CURRENT:**	**117 A**
MOTORS	7.26 kVA	100.00%	7.26 kVA	**TOTAL DEMAND CURRENT:**	**126 A**
KITCHEN	0.00 kVA				
REFRIGERATION	0.00 kVA				
HVAC COOL	0.00 kVA	100.00%	0.00 kVA		
HVAC HEAT	0.00 kVA	0.00%	0.00 kVA		

L2 — PANELBOARD

208/120 Wye,3PH,4W
225 A
MLO
SURFACE, TYPE 1

LOCATION: ELECTRICAL 108
SUPPLY FROM: L1
UPSTREAM OCPD: 225 A
SERVES: LIGHTING & APPLIANCES

SERIES RATED
22K AIC

2-SECTION PANEL SECTION 2 OF 2

CKT	Circuit Description	Wire	Trip	Poles	A		B		C		Poles	Trip	Wire	Circuit Description	CKT
1	REC - EXTERIOR	12	20 A	1	0.90	0.18					1	20 A	12	REFRIGERATOR(4)	2
3	REC - OFFICE	12	20 A	1			0.36	0.18			1	20 A	12	MICROWAVE	4
5	REC - OFFICE	12	20 A	1					0.54	0.72	1	20 A	12	REC - BREAK ROOM	6
7	LTG - VACUUM CANOPY (6,11)	10	20 A	1	0.65	0.22					1	20 A	12	LTG- RESTROOM	8
9	WASHER	12	20 A	1			0.18	0.92			1	20 A	12	HAND DRYER(2)	10
11	REC - MECH ROOM	12	20 A	1					0.72	0.18	1	20 A	12	IT RACK	12
13	EXTERIOR SIGNAGE (11)	12	20 A	1	0.18	0.36					1	20 A	12	REC - TELEPHONE BOARD	14
15	EXTERIOR SIGNAGE (11)	12	20 A	1			0.18	0.36			1	20 A	12	REC - TELEPHONE BOARD	16
17	UNDER CARRIAGE SIGN - #29-B	12	20 A	1					0.30	0.18	1	20 A	12	WATER COOLER(4)	18
19	COLOR FOAMER SIGN - #29-C	12	20 A	1	0.30	0.18					1	20 A	12	RECIRC PUMP(4)	20
21	SEALER WAX SIGN - #29-D	12	20 A	1			0.30	1.20			1	20 A	12	EXTERIOR LIGHTING(2,11)	22
23	SPOT FREE SIGN - #29-G	12	20 A	1					0.30	0.49	1	15 A	12	WATER SOFTENER	24
25	FUSION WAX SIGN - #29-Q	12	20 A	1	0.30	0.50					1	20 A	12	TIMECLOCK(2)	26
27	FUSION CERAMIC SIGN - #29-S	12	20 A	1			0.30	0.72			1	20 A	12	RECEPTACLES	28
29	FUSION CERAMIC SIGN - #29-S	12	20 A	1					0.30	--	1	--		SPACE	30
			TOTAL CONNECTED KVA:		3.77 kVA		4.70 kVA		3.73 kVA						
			TOTAL CONNECTED AMPS:		31.49 A		39.22 A		31.08 A						

PER NEC ARTICLE 220

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	TOTAL DEMAND	PANEL TOTALS	
CONTINUOUS	0.00 kVA				
NON-CONTINUOUS	2.59 kVA	100.00%	2.59 kVA	**TOTAL CONN. LOAD:**	**12.20 kVA**
LIGHTING	1.89 kVA	125.00%	2.37 kVA	**TOTAL DEMAND LOAD:**	**12.68 kVA**
RECEPTACLES	7.54 kVA	100.00%	7.54 kVA	**TOTAL CONN. CURRENT:**	**34 A**
MOTORS	0.18 kVA	100.00%	0.18 kVA	**TOTAL DEMAND CURRENT:**	**35 A**
KITCHEN	0.00 kVA				
REFRIGERATION	0.00 kVA				
HVAC COOL	0.00 kVA	100.00%	0.00 kVA		
HVAC HEAT	0.00 kVA	0.00%	0.00 kVA		

PANELBOARD NOTES ( )

(1) TERMINATE GROUND ON ISOLATED GROUND BUS.

(2) INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-OFF FOR MAINTENANCE).

(3) INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-ON FOR CRITICAL LOAD).

(4) GFI BREAKER FOR PERSONNEL PROTECTION (5 mA).

(5) GFI BREAKER FOR EQUIPMENT PROTECTION (30 mA).

(6) CONDUCTOR SIZE HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUNDING CONDUCTOR PROPORTIONALLY PER NEC.

(7) REFER TO ONE-LINE DIAGRAM FOR AVAILABLE FAULT CURRENT FOR INTERRUPTING RATINGS.

(8) REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.

(9) FACTORY WIRED TO LOAD.

(10) HACR TYPE RATED BREAKER.

(11) THRU TIMER / CONTACTOR.

(12) BREAKER RATED FOR SWITCHING DUTY.

HFA
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TRUE BLUE CAR WASH
8595 EDINBURGH CENTRE DR.
BROOKLYN PARK, MN 55443
JOB NUMBER: 06-23-80005

ISSUE BLOCK

	PERMIT	01/10/23

CHECKED BY: JAC
DRAWN BY: IN
DOCUMENT DATE: 01/10/23

Jaime Andres Castaneda

Digitally signed by Jaime Andres Castaneda
DN: E=jaime.castaneda@hfa-ae.com, CN=Jaime Andres Castaneda, O=Hawkins Ferguson Associates, L=Bentonville, S=ARKANSAS, C=US
Date: 2024.01.10 15:18:09-06'00'

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
PRINT NAME: JAIME A. CASTANEDA
SIGNATURE:
DATE:
LICENSE NO: 51070

ELECTRICAL PANEL SCHEDULES

SHEET: E602

1/10/2024 12:06:34 PM
C:\Users\jnna.rawberg\Documents\2022 Revit Projects\06-23-80005 True Blue Carwash - Brooklyn Park, MN_MEP_V22_HFA.jnna.Rawberg.rvt
E602-ELECTRICAL PANEL SCHEDULES

City of Brooklyn Park
Planning Commission Staff Report

Agenda Item:	5.3	**Meeting Date:**	February 14, 2024
Agenda Section:	Public Hearings	**Originating Department:**	Community Development
Resolution:			
Ordinance:	X	**Prepared By:**	Erin McDermott, Associate Planner
Attachments:	5	**Presented By:**	Erin McDermott, Associate Planner
Item:	Zoning Code Text Amendment: 152.530 Mississippi River Corridor Critical Area (MRCCA)		

Proposed Action:

MOTION _____ SECOND _____ TO RECOMMEND APPROVAL OF AN ORDINANCE AMENDING CHAPTER 152 OF THE BROOKLYN PARK CODE OF ORDINANCES PERTAINING TO THE MISSISSIPPI RIVER CORRIDOR CRITICAL AREA.

Staff Recommendation:

Staff recommends approval of proposed ordinance changes.

Overview:

In 2017, the Minnesota Legislature passed a law requiring all cities within the Mississippi River Corridor Critical Area (MRCCA) to adopt updated regulations protecting the river. The proposed amendment must be adopted into the Zoning Ordinance to comply with state law (Minn. Rule 6106.0070 Subp. 5.).

The MRCCA was established in 1976 by State legislation, at which time the boundaries were described. Within Brooklyn Park, there are three MRCCA districts identified, Rural and Open Space (ROS), River Neighborhood (RN), and Separated from River (SR). The only properties identified as ROS are islands in the Mississippi River. Properties identified as RN are riparian lots– those adjacent to the river, and properties identified as SR are non-riparian lots. The boundary of the MRCCA for the majority of the city is West River Road, with a portion of the Willowstone neighborhood being included. While the map of affected properties is attached to this report, the Brooklyn Park Zoning Map is not being amended at this time, as the entire map will be amended as part of the overall 2040 Comprehensive Plan zoning update which is anticipated to be completed by June 2024.

The Department of Natural Resources (DNR) provided a model ordinance for each municipality affected by the MRCCA to adopt. The standards within this amendment are the same standards against which the DNR was previously reviewing development. By adopting this language into ordinance, it provides transparency to the property owners impacted by these regulations.

Staff mailed an informational letter to all impacted property owners prior to the mailing of the public hearing notice, as well as posted the proposed Ordinance text on the City website. There were 6 emails and 47 phone calls received by staff from the property owners with questions regarding the changes and how they would impact each property.

Technical Changes

The text amendment replaces the text of Code Section 152.530 which articulates setbacks and guidelines for developed lots with text that provides in depth guidance for development and land uses within the MRCCA. The standards being adopted in this text amendment were provided by the DNR, as they are the standards with which all permits in this area were being reviewed previously. The impact of the adoption of this amendment are not on changes to the properties within this overlay district, but with how permits are reviewed, as it is now the responsibility of City staff to perform the permit reviews.

- Within the MRCCA there are individual zoning overlays impacting properties, three of which exist in Brooklyn Park.
- Special land uses are articulated with requirements for each.
- Structure height and placement are articulated within each MRCCA district.
- Performance standards for uses are spelled out. These standards are in addition to those already guided by the underlying zoning.
- Vegetation management and land alteration provide standards for which permits will be issued. This will be administered by the City, where the DNR had regulated this in the past.
- A use table is included to note what activities are permitted, conditional, and not permitted within the MRCCA.

Budgetary/Fiscal Issues:

Not applicable.

Alternatives to Consider:

1. Approve the text amendment as presented.
2. Approve the text amendment with modifications.
3. Decline to approve the text amendment.

Attachments:

5.3A Zoning Code Text Amendment: Mississippi River Corridor Critical Area
5.3B Zoning Code Text Amendment: Definitions
5.3C DNR Conditional Approval
5.3D MRCCA Overlay Map
5.3E Letter to Impacted Property Owners and Communication from Impacted Property Owner

152.530 MISSISSIPPI RIVER CORRIDOR CRITICAL AREA

A. AUTHORITY, INTENT AND PURPOSE

(1) **Statutory Authorization.** This Mississippi River Corridor Critical Area (MRCCA) section is adopted pursuant to the authorization and policies contained in Minnesota Statutes, Chapter 116G, Minnesota Rules, Parts 6106.0010 - 6106.0180, and the planning and zoning enabling legislation in Minnesota Statutes, Chapter 462 and 473.

(2) **Policy**. The Legislature of Minnesota has delegated responsibility to local governments of the state to regulate the subdivision, use and development of designated critical areas and thus preserve and enhance the quality of important historic, cultural, aesthetic values, and natural systems and provide for the wise use of these areas.

B. GENERAL PROVISIONS

(1) **Jurisdiction.** The provisions of this *section* apply to land within the river corridor boundary as described in the State Register, volume 43, pages 508 to 519 and shown on the zoning map (*insert reference citation).*

(2) **Enforcement.** The *City Manager* is responsible for the administration and enforcement of this section. Any violation of its provisions or failure to comply with any of its requirements including violations of conditions and safeguards established in connection with grants of variances or conditional uses constitutes a misdemeanor and is punishable as defined by law. Violations of this *section* can occur regardless of whether a permit is required for a regulated activity listed in Section 152.530(C)(2).

(3) **Severability**. If any section, clause, provision, or portion of this *section* is judged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this *section)* shall not be affected thereby.

(4) **Abrogation and Greater Restrictions.** It is not intended by this *section* to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this *section* imposes greater restrictions, the provisions of this *section* shall prevail. All other *sections* inconsistent with this *section* are hereby repealed to the extent of the inconsistency only.

(5) **Underlying Zoning.** Uses and standards of underlying zoning districts apply except where standards of this overlay district are more restrictive.

C. ADMINISTRATION

(1) **Purpose.** The purpose of this Section is to identify administrative provisions to ensure this *section* is administered consistent with its purpose.

(2) **Permits.** A permit is required for the construction of structures and additions (including construction of decks and signs), the installation and/or alteration of sewage treatment systems, vegetation removal consistent with Section 152.530(I) and land alterations consistent with Section 152.530(J).

(3) **Variances.** Variances to the requirements under this *section* may only be granted in accordance with Minnesota Statutes, Section 462.357 and must consider the potential impacts of variances on primary conservation areas, public river corridor views, and other resources identified in the MRCCA plan. In reviewing the variance application, the *City Council* shall:

(A) Evaluate the impacts to these resources**.** If negative impacts are found, require conditions to mitigate the impacts that are related to and proportional to the impacts, consistent with Section 152.530(C)(5) and

(B) Make written findings that the variance is consistent with the purpose of this section**,** as follows.

i. The extent, location and intensity of the variance will be in substantial compliance with the MRCCA Plan;

ii. The variance is consistent with the character and management purpose of the MRCCA district in which it is located;

iii. The variance will not be detrimental to PCAs and PRCVs nor will it contribute to negative incremental impacts to PCAs and PRCVs when considered in the context of past, present and reasonable future actions; and

(4) **Conditional and interim use permits.** All conditional and interim uses, required under this *section,* must comply with Minnesota Statutes, section 462.3595 and must consider the potential impacts on primary conservation areas, public river corridor views, and other resources identified in the MRCCA plan. In reviewing the application, the *City Council* shall:

(A) Evaluate the impacts to these resources and if negative impacts are found, require conditions to mitigate the impacts that are related to and proportional to the impacts, consistent with Section 3.5; and

(B) Make written findings that the conditional use is consistent with the purpose of this (section, chapter, or article), as follows.

i. The extent, location and intensity of the conditional use will be in substantial compliance with the MRCCA Plan;

ii. The conditional use is consistent with the character and management purpose of the MRCCA district in which it is located;

iii. The conditional use will not be detrimental to PCAs and PRCVs nor will it contribute to negative incremental impacts to PCAs and PRCVs when considered in the context of past, present and reasonable future actions; and

(5) Conditions of Approval. The *City Council* shall evaluate the impacts to PCAs, PRCVs, and other resources identified in the MRCCA Plan, and if negative impacts are found, require conditions to mitigate the impacts that are related to and proportional to the impacts. Mitigation may include:

(A) Restoration of vegetation identified as “vegetation restoration priorities” identified in the MRCCA plan.

(B) Preservation of existing vegetation;

(C) Stormwater runoff management;

(D) Reducing impervious surface;

(E) Increasing structure setbacks;

(F) Wetland and drainageway restoration and/or preservation; and

(G) Other conservation measures.

(6) **Application materials.** Applications for permits and discretionary actions required under this *section* must submit the following information unless the City Manager determines that the information is not needed.

(A) A detailed project description; and

(B) Scaled maps and plans, dimensional renderings, maintenance agreements, and other materials that identify and describe:

i. Primary conservation areas;

ii. Public river corridor views;

iii. Buildable area;

iv. Existing and proposed topography and drainage patterns;

v. Proposed storm water and erosion and sediment control practices;

vi. Existing and proposed vegetation to be removed and established;

vii. Ordinary high water level, blufflines, and all required setbacks;

viii. Existing and proposed structures;

ix. Existing and proposed impervious surfaces; and

x. Existing and proposed subsurface sewage treatment systems.

(7) Nonconformities.

(A) All legally established nonconformities as of the date of this ordinance may continue consistent with 462.357 Subd. 1e.

(B) New structures erected in conformance with the setback averaging provisions of Section 152.530(F)(4) are conforming structures.

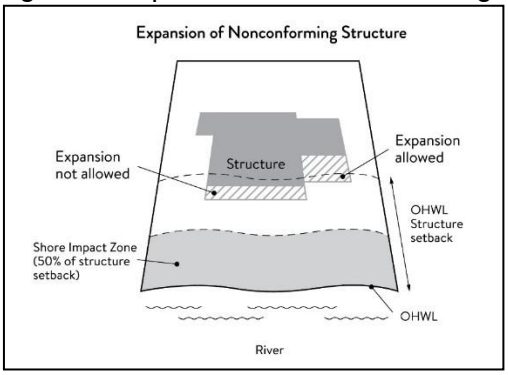
(C) Site alterations and expansion of site alterations that were legally made prior to the effective date of this ordinance are conforming. Site alterations include vegetation, erosion control, storm water control measures, and other nonstructural site improvements.

(D) Legally nonconforming principal structures that do not meet the setback requirements of Section 152.530(F)(3) may be expanded laterally provided that:

i. The expansion does not extend into the shore or bluff impact zone or further into the required setback than the building line of the existing principal structure (See Figure 5); and

ii. The expanded structure's scale and bulk is consistent with that of the original structure and existing surrounding development.

Figure 5. Expansion of Nonconforming Structure



(8) Notifications.

(A) Amendments to this *section* and to the MRCCA plan must be submitted to the Commissioner as provided in Minnesota Rules, part 6106.0070, Subp. 3, Items B – I.

(B) Notice of public hearings for discretionary actions, including conditional and interim use permits, variances, appeals, rezonings, preliminary plats, final subdivision plats, master plans, and PUDs, must be sent to the following entities at least ten (10) days prior to the hearing:

i. The Commissioner in a format prescribed by the DNR;

ii. National Park Service; and

iii. Where building heights exceed the height limits specified in Section 152.530(F)(2) as part of the conditional use or variance process, adjoining local governments within the MRCCA, including those with overlapping jurisdiction and those across the river.

(C) Notice of final decisions for actions in Section 152.530(C)(7)(A), including findings of fact, must be sent to the Commissioner, the National Park Service, and adjoining local governments within the MRCCA within ten (10) days of the final decision.

(D) Requests to amend district boundaries must follow the provisions in Minnesota Rules, part 6106.0100, Subp. 9, Item C.

(E) The DNR will be notified at time of application submittal of master plans, PUDs, preliminary, and final plats.

(9) **Accommodating disabilities.** Reasonable accommodations for ramps or other facilities to provide persons with disabilities access to the persons' property, as required by the federal Americans with Disabilities Act and the federal Fair Housing Act and as provided by Minnesota Rules, chapter 1341, must:

(A) Comply with Sections 152.530(F) to 152.530(L); or

(B) If Sections 152.530(F) to 152.530(L) cannot be complied with, ramps or other facilities are allowed with an administrative permit provided:

i. The permit terminates on either a specific date or upon occurrence of a particular event related to the person requiring accommodation; and

ii. Upon expiration of the permit, the ramp or other facilities must be removed.

D. MRCCA DISTRICTS

(1) **Purpose**. The purpose of this Section is to establish districts under which building height and structure placement are regulated to protect and enhance the Mississippi River's resources and features consistent with the natural and built character of each district.

(2) **District description and management purpose**. The MRCCA within the Brooklyn Park is divided into the following MRCCA Districts:

(A) Rural and Open Space (ROS).

i. Description. The ROS District is characterized by rural and low-density development patterns and land uses, and includes land that is riparian or visible from the river, as well as large, undeveloped tracts of high ecological and scenic value, floodplain, and undeveloped islands. Many primary conservation areas exist in the district.

ii. Management purpose. The ROS District must be managed to sustain and restore the rural and natural character of the corridor and to protect and enhance habitat, parks and open space, public river corridor views, and scenic, natural, and historic areas.

(B) River Neighborhood (RN).

i. Description. The RN District is characterized by primarily residential neighborhoods that are riparian or readily visible from the river or that abut riparian parkland. The district includes parks and open space, limited commercial development, marinas, and related land uses.

ii. Management purpose. The RN District must be managed to maintain the character of the river corridor within the context of existing residential and related neighborhood development, and to protect and enhance habitat, parks and open space, public river corridor views, and scenic, natural, and historic areas. Minimizing erosion and the flow of untreated storm water into the river and enhancing habitat and shoreline vegetation are priorities in the district.

(C) Separated from River (SR).

i. Description. The SR District is characterized by its physical and visual distance from the Mississippi River. The district includes land separated from the river by distance, topography, development, or a transportation corridor. The land in this district is not readily visible from the Mississippi River.

ii. Management purpose. The SR district provides flexibility in managing development without negatively affecting the key resources and features of the river corridor. Minimizing negative

impacts to primary conservation areas and minimizing erosion and flow of untreated storm water into the Mississippi River are priorities in the district. The RTC district must be managed in a manner that allows continued growth and redevelopment in historic downtowns and more intensive redevelopment in limited areas at river crossings to accommodate compact walkable development patterns and connections to the river. Minimizing erosion and the flow of untreated storm water into the river, providing public access to and public views of the river, and restoring natural vegetation in riparian areas and tree canopy are priorities in the district.

(3) **MRCCA district map**. The locations and boundaries of the MRCCA districts established by this section are shown on MRCCA Overlay District map which is incorporated herein by reference. The district boundary lines are intended to follow the centerlines of rivers and streams, highways, streets, lot lines, and municipal boundaries, unless a boundary line is otherwise indicated on the map. Where district boundaries cross unsubdivided property, the district boundary line is determined by use of dimensions or the scale appearing on the map.

E. SPECIAL LAND USE PROVISIONS

(1) **Purpose.** To identify development standards and considerations for land uses that have potential to negatively impact primary conservation areas and public river corridor views.

(2) **Underlying zoning.** Uses within the MRCCA are determined by underlying zoning, with additional provisions for the following land uses:

(A) **Agricultural use.** Perennial ground cover is required within 50 feet of the ordinary high water level and within the bluff impact zone.

(B) **Feedlots.** New animal feedlots and manure storage areas are prohibited. Existing animal feedlots and manure storage areas must conform with Minnesota Rules, chapter 7020.

(C) **Forestry.** Tree harvesting and biomass harvesting within woodlands, and associated reforestation, must be consistent with recommended practices in Conserving Wooded Areas in Developing Communities: Best Management Practices in Minnesota.

(D) **Nonmetallic mining.** Nonmetallic mining requires a conditional use permit or interim use permit issued by the local government, subject to the following:

i. New nonmetallic mining is prohibited within the shore impact zone and bluff impact zone and within the required structure setback from the bluffline and OHWL;

ii. Processing machinery must be located consistent with setback standards for structures as provided in Section 152.530(F)(3);

iii. Only one barge loading area, which must be limited to the minimum size practicable, is permitted for each mining operation;

iv. New and, where practicable, existing nonmetallic mining operations must not be readily visible and must be screened by establishing and maintaining natural vegetation. The unscreened boundaries of nonmetallic mining areas are limited to only the barge loading area;

v. A site management plan must be developed by the operator and approved by the local government before new nonmetallic mining commences. Operations must be consistent with the site plan throughout the duration of operations at the site. The site management plan must:

(a) Describe how the site will be developed over time with an emphasis on minimizing environmental risk to public waters;

(b) Explain where staged reclamation may occur at certain points during the life of the site;

(c) Address dust, noise, storm water management, possible pollutant discharges, days and hours of operation, and duration of operations; and

(d) Describe any anticipated vegetation and topographic alterations outside the pit, and reclamation plans consistent with the stated end use for the land; and;

vi. Existing and new nonmetallic mining operations must submit land reclamation plans to the local government compatible with the purposes of this ordinance.

(E) **River-dependent uses.** River-dependent uses must comply with the following design standards:

i. Structures and parking areas, except shoreline facilities and private roads and conveyances serving river- dependent uses as provided in Section 152.530(L), must meet the dimensional and performance standards in this *section,* must be designed so that they are not readily visible, and must be screened by establishing and maintaining natural vegetation;

ii. Shoreline facilities must comply with Minnesota Rules, chapter 6115 and must:

(e) Be designed in a compact fashion to minimize the shoreline area affected; and

(f) Minimize the surface area of land occupied in relation to the number of watercraft or barges to be served; and

iii. Dredging and placement of dredged material are subject to existing federal and state permit requirements and agreements.

(F) **Wireless communication towers.** Wireless communication towers require a conditional or interim use permit and are subject to the following design standards:

i. The applicant must demonstrate that functional coverage cannot be provided through co-location, a tower at a lower height, or a tower at a location outside of the MRCCA;

ii. The tower must not be located in a bluff or shore impact zone; and

iii. Placement of the tower must minimize impacts on public river corridor views.

iv. Comply with the general design standards in Section 152.530(H)(2).

F. STRUCTURE HEIGHT AND PLACEMENT AND LOT SIZE

(1) **Purpose.** To establish standards that protect primary conservation areas and public river corridor views from development impacts and ensure that new development is sited consistent with the purpose of the MRCCA.

(2) **Structure height.** Structures and facilities must comply with the following standards unless identified as exempt in Section 152.530(L).

(A) Structures and facilities must comply with the following standards unless identified as exempt in Section 152.530(L)

i. ROS District: 35 feet or lower**.**

ii. RN District: 35 feet.

iii. SR District: Height is determined by underlying zoning, provided the allowed height is consistent with that of the mature treeline, where present, and existing surrounding development, as viewed from the OWHL of the opposite shore.

(B) Height is measured on the side of the structure facing the Mississippi River.

(C) In addition to the conditional use permit requirements of Section 152.530(C)(4), criteria for considering whether to grant a conditional use permit for structures exceeding the height limits must include:

i. Assessment of the visual impact of the proposed structure on public river corridor views, including views from other communities;

ii. Determination that the proposed structure meets the required bluff and OHWL setbacks;

iii. Identification and application of techniques to minimize the perceived bulk of the proposed structure, such as:

(a) Placing the long axis of the building perpendicular to the river;

(b) Stepping back of portions of the facade;

(c) Lowering the roof pitch or use of a flat roof;

(d) Using building materials or mitigation techniques that will blend in with the natural surroundings such as green roofs, green walls, or other green and brown building materials;

(e) Narrowing the profile of upper floors of the building; or

(f) Increasing the setbacks of the building from the Mississippi River or blufflines;

iv. Identification of techniques for preservation of those view corridors identified in the MRCCA Plan; and

v. Opportunities for creation or enhancement of public river corridor views.

(3) Structure and impervious surface placement.

(A) Structures and impervious surface must not be placed in the shore or bluff impact zones unless identified as an exemption in Section 152.530(L).

(B) Structures and facilities must comply with the following OHWL setback provisions unless identified as exempt in Section 152.530(L).

i. ROS District: 200 feet from the Mississippi River and 150 feet from the Minnesota and Vermillion Rivers.

ii. RN District: 100 feet from the Mississippi River and 75 feet from the Rum and Vermillion Rivers.

iii. SR District: 75 feet from the Vermillion River.

(C) Structures and facilities must comply with the following bluffline setback provisions unless identified as exempt in Section 152.530(L):

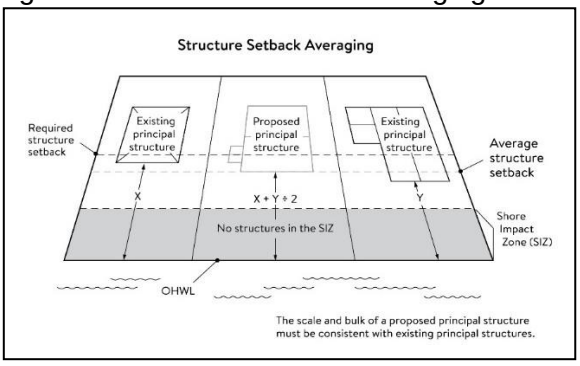
i. ROS District: 100 feet.

ii. RN District: 40 feet.

iii. SR District: 40 feet.

(D) Where principal structures exist on the adjoining lots on both sides of a proposed building site, the minimum setback may be altered to conform to the average of the adjoining setbacks, if the new structure's scale and bulk riverward or bluffward of the setbacks required under Sections 152.530(F)(3)(B) and 152.530(F)(3)(C) are consistent with adjoining development. See Figure 6.

Figure 6. Structure Setback Averaging



(E) Subsurface sewage treatment systems, including the septic tank and absorption area, must be located at least 75 feet from the ordinary high water level of the Mississippi River and all other public waters.

(4) Lot size and buildable area.

(A) The width of lots abutting the Mississippi River in the ROS District must be at least 200 feet, unless alternative design methods are used that provide greater protection of the riparian area.

(B) All new lots must have adequate buildable area to comply with the setback requirements of Sections 152.530(F)(3)(B) and 152.530(F)(3)(C) so as to not require variances to use the lots for their intended purpose.

G. PERFORMANCE STANDARDS FOR PRIVATE FACILITIES

(1) **Purpose.** To establish design standards for private facilities that are consistent with best management practices and that minimize impacts to primary conservation areas, public river corridor views and other resources identified in the MRCCA plan.

(2) **General design standards**. All private facilities must be developed in accordance with the vegetation management and land alteration requirements in Sections 152.530(I) and 152.530(J).

(3) **Private roads, driveways, and parking areas**. Except as provided in Section 152.530(L), private roads, driveways and parking areas must:

(A) Be designed to take advantage of natural vegetation and topography so that they are not readily visible;

(B) Comply with structure setback requirements according to Section 152.530(F)(3); and

(C) Not be placed within the bluff impact zone or shore impact zone, unless exempt under Section 152.530(L) and designed consistent with Section 152.530(H)(2).

(4) Private water access and viewing facilities.

(A) Private access paths must be no more than:

i. Eight feet wide, if placed within the shore impact zone; and

ii. Four feet wide, if placed within the bluff impact zone.

(B) Private water access ramps must:

i. Comply with Minnesota Rules, chapters 6115.0210 and 6280.0250; and

ii. Be designed and constructed consistent with the applicable standards in Design Handbook for Recreational Boating and Fishing Facilities.

(C) Design and construction of private stairways, lifts, and landings are subject to the following standards:

i. Stairways and lifts must not exceed four feet in width on residential lots. Wider stairways may be used for commercial properties and residential facilities held in common, if approved by the City Manager;

ii. Landings for stairways and lifts on residential lots must not exceed 32 square feet in area. Landings larger than 32 square feet area allowed for commercial properties and residential facilities held in common, if approved by the City Manager;

iii. Canopies or roofs are prohibited on stairways, lifts, or landings;

iv. Stairways, lifts, and landings must be located in the least visible portion of the lot whenever practical; and

v. Ramps, lifts, mobility paths, or other facilities for persons with physical disabilities are allowed for achieving access to shore areas according to Section 152.530(G)(4)(C)i-iv., and as provided under Section 152.530(C)(9).

(D) One water-oriented accessory structure is allowed for each riparian lot or parcel less than 300 feet in width at the ordinary high water level, with one additional water-oriented accessory structure allowed for each additional 300 feet of shoreline on the same lot or parcel. Water-oriented accessory structures are prohibited in the bluff impact zone and must:

i. Not exceed 12 feet in height;

ii. Not exceed 120 square feet in area; and

iii. Be placed a minimum of 10 feet from the ordinary high water level.

(5) **Decks and patios in setback areas.** Decks and at-grade patios may encroach into the required setbacks from the ordinary high water level and blufflines without a variance, when consistent with Sections 152.530(I) and 152.530(J), provided that:

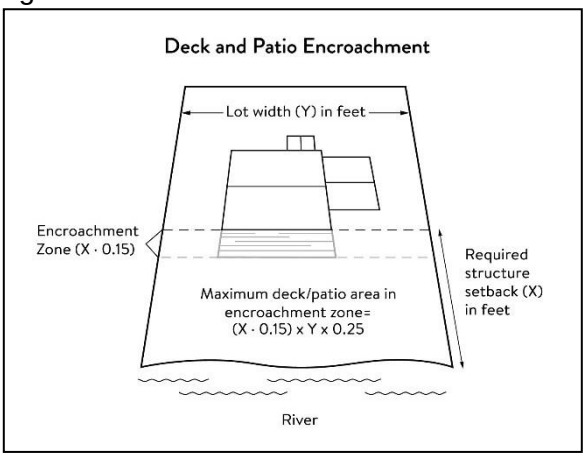
(A) The encroachment of the deck or patio into the required setback area does not exceed 15 percent of the required structure setback;

(B) the area of the deck or patio that extends into the required setback area occupies no more than 25 percent of the total area between the required setback and the 15 percent using the formula:

[Required setback depth (feet) x 0.15 x lot width (feet) x 0.25 = maximum total area]

(C) The deck or patio does not extend into the bluff impact zone. See Figure 7.

Figure 7. Deck and Patio Encroachment



(6) directional signs.

(A) Directional signs for patrons arriving at a business by watercraft must comply with the following standards:

i. They must be consistent with Minnesota Statutes, section 86B.115.

ii. Only convey the location and name of the establishment and the general types of goods and services available, if located in a shore impact zone.

iii. Be no greater than ten feet in height and 32 square feet in surface area; and

iv. If illuminated, the lighting must be shielded to prevent illumination out across the river or to the sky.

(7) Fences. Fences between principal structures and the river are allowed if fences are:

(A) Not higher than six feet.

(B) Not located within 40 feet of slopes greater than 12%.

(C) Not located in the regulatory floodplain.

H. PERFORMANCE STANDARDS FOR PUBLIC FACILITIES

(1) **Purpose.** To establish design standards for public facilities that are consistent with best management practices and that minimize impacts to primary conservation areas, public river corridor views and other resources identified in the MRCCA plan. Public facilities serve the public interest by providing public access to the Mississippi River corridor or require locations in or adjacent to the river corridor and therefore require some degree of flexibility.

(2) **General design standards**. All public facilities must be designed and constructed to:

(A) Minimize visibility of the facility from the river to the extent consistent with the purpose of the facility;

(B) Comply with the structure placement and height standards in Section 152.530(F), except as provided in Section 152.530(L);

(C) Be consistent with the vegetation management standards in Section 152.530(I) and the land alteration and storm water management standards in Section 152.530(J), including use of practices identified in Best Practices for Meeting DNR General Public Waters Work Permit GP 2004-0001, where applicable;

(D) Avoid primary conservation areas, unless no alternative exists. If no alternative exists, then disturbance to primary conservation areas must be avoided to the greatest extent practicable, and design and construction must minimize impacts; and

(E) Minimize disturbance of spawning and nesting times by scheduling construction at times when local fish and wildlife are not spawning or nesting.

(3) **Right-of-way maintenance standards**. Right-of-way maintenance must comply with the following standards:

(A) Vegetation currently in a natural state must be maintained to the extent feasible;

(B) Where vegetation in a natural state has been removed, native plants must be planted and maintained on the right- of-way; and

(C) Chemical control of vegetation must be avoided when practicable, but when chemical control is necessary, chemicals used must be in accordance with the regulations and other requirements of all state and federal agencies with authority over the chemical's use.

(4) **Crossings of public water or public land.** Crossings of public waters or land controlled by the commissioner are subject to approval by the commissioner according to Minnesota Statutes, sections 84.415 and 103G.245.

(5) **Public utilities**. Public utilities must comply with the following standards:

(A) High-voltage transmission lines, wind energy conversion systems greater than five megawatts, and pipelines are regulated according to Minnesota Statutes, chapter 216E, 216F, and 216G respectively; and

(B) If overhead placement is necessary, utility facility crossings must minimize visibility of the facility from the river and follow other existing right of ways as much as practicable.

(C) The appearance of structures must be as compatible as practicable with the surrounding area in a natural state with regard to height and width, materials used, and color.

(D) Wireless communication facilities, according to Section 152.530(E)(2)(F).

(6) **Public transportation facilities**. Public transportation facilities shall comply with structure placement and height standards in Section 152.530(F). Where such facilities intersect or about two or more MRCCA districts, the least restrictive standards apply. Public transportation facilities must be designed and constructed to give priority to:

(A) Providing scenic overlooks for motorists, bicyclists, and pedestrians;

(B) Providing safe pedestrian crossings and facilities along the river corridor;

(C) Providing access to the riverfront in public ownership; and

(D) Allowing for use of the land between the river and the transportation facility.

(7) **Public recreational facilities**. Where such facilities intersect or abut two or more MRCCA districts, the least restrictive dimensional standards apply. Public transportation facilities must be designed and constructed to give priority to:

(A) Buildings and parking associated with pubic recreational facilities must comply with the structure placement and height standards in Section 152.530(F), except as provided in Section 152.530(L);

(B) Roads and driveways associated with public recreational facilities must not be placed in the bluff or shore impact zones unless no other placement alternative exists. If no alternative exists, then design and construction must minimize impacts to shoreline vegetation, erodible soils and slopes, and other sensitive resources.

(C) Trails, access paths, and viewing areas associated with public recreational facilities and providing access to or views of the Mississippi River are allowed within the bluff and shore impact zones if design, construction, and maintenance methods are consistent with the best management practice guidelines in Trail Planning, Design, and Development Guidelines.

i. Hard-surface trails are not allowed on the face of bluffs with a slope exceeding 30 percent. Natural surface trails are allowed, provided they do not exceed eight feet in width.

ii. Trails, paths, and viewing areas must be designed and constructed to minimize:

(a) Visibility from the river;

(b) Visual impacts on public river corridor views; and

(c) Disturbance to and fragmentation of primary conservation areas.

(D) Public water access facilities must comply with the following requirements:

iii. Watercraft access ramps must comply with Minnesota Rules chapters 6115.0210 and 6280.0250; and

iv. Facilities must be designed and constructed consistent with the standards in Design Handbook for Recreational Boating and Fishing Facilities.

(E) Public signs and kiosks for interpretive or directional purposes are allowed in the bluff or shore impact zones, provided they are placed and constructed to minimize disturbance to these areas and avoid visual impacts on public river corridor views.

(F) Public stairways, lifts, and landings must be designed as provided in Section 152.530(G)(4)(C).

I. VEGETATION MANAGEMENT

(1) **Purpose.** To establish standards that sustain and enhance the biological and ecological functions of vegetation; preserve the natural character and topography of the MRCCA; and maintain stability of bluffs and steep slopes and ensure stability of other erosion-prone areas.

(2) **Applicability.** This section applies to:

(A) Shore impact zones;

(B) Areas within 50 feet of a wetland or natural drainage way;

(C) Bluff impact zones;

(D) Areas of native plant communities; and

(E) Significant existing vegetative stands identified in the MRCCA plan.

(3) Activities allowed without a vegetation permit.

(A) Maintenance of existing lawns, landscaping and gardens;

(B) Removal of vegetation in emergency situations as determined by the City Manager;

(C) Right-of-way maintenance for public facilities meeting the standards Section 152.530(H)(3);

(D) Agricultural and forestry activities meeting the standards of Sections 152.530(E)(2)(A) and 152.530(E)(2)(C);

(E) Selective vegetation removal, provided that vegetative cover remains consistent with the management purpose of the MRCCA District, including:

i. Vegetation that is dead, diseased, dying, or hazardous;

ii. To prevent the spread of diseases or insect pests;

iii. Individual trees and shrubs; and

iv. Removal of invasive non-native species.

(4) Activities allowed with a vegetation permit.

(A) The following intensive vegetation clearing activities are allowed with a vegetation permit:

i. Clearing of vegetation that is dead, diseased, dying, or hazardous;

ii. Clearing to prevent the spread of diseases or insect pests;

iii. Clearing to remove invasive non-native species.

iv. Clearing to prepare for restoration and erosion control management activities consistent with a plan approved by the City Manager.

v. The minimum necessary for development that is allowed with a building permit or as an exemption under Section 152.530(L).

(B) Conditions of vegetation permit approval:

i. Development is sited to minimize removal of or disturbance to natural vegetation;

ii. Soil, slope stability, and hydrologic conditions are suitable for the proposed work as determined by a professional engineer or (*insert name of resource agency, if someone other than professional engineer is desired*);

iii. Clearing is the minimum necessary and designed to blend with the natural terrain and minimize visual impacts to public river corridor views;

iv. Any native plant communities removed are replaced with vegetation that provides equivalent biological and ecological functions consistent with an approved vegetation restoration plan as provided in Section 152.530(I)(6)(B). If replaced, priorities for restoration are stabilization of erodible soils, restoration or enhancement of shoreline vegetation, and revegetation of bluffs or steep slopes visible from the river;

v. All other vegetation removed is restored with natural vegetation to the greatest extent practicable consistent with an approved vegetation restoration plan as provided in Section 152.530(I)(6)(B). Priorities for replacement are the same as under Section 152.530(I)(4)(B)iv.;

vi. Any disturbance of highly erodible soils is replanted with deep-rooted vegetation with a high stem density;

vii. Vegetation removal activities are conducted so as to expose the smallest practical area of soil to erosion for the least possible time;

viii. Areas of vegetation restoration priorities identified in the MRCCA plan are restored, if applicable; and

ix. Any other condition determined necessary to achieve the purpose of this section.

(5) **Prohibited activities.** All other intensive vegetation clearing is prohibited.

(6) Vegetation restoration plan.

(A) Development of a vegetation restoration plan and reestablishment of natural vegetation is required:

i. As a condition of a vegetation permit issued under Section 152.530(I)(4)(B)iv and 152.530(I)(4)(B)v;

ii. Upon failure to comply with any provisions in this section; or

iii. As part of the planning process for subdivisions as provided in Section 152.530(K).

(B) The vegetation restoration plan must satisfy the application submittal requirements in 152.530(C)(6), and:

i. Include vegetation that provides suitable habitat and effective soil stability, runoff retention, and infiltration capability. Vegetation species, composition, density, and diversity must be guided by nearby patches of native plant communities and by Native Vegetation Establishment and Enhancement Guidelines;

ii. Be prepared by a qualified individual; and

iii. Include a maintenance plan that includes management provisions for controlling invasive species and replacement of plant loss for three years.

(C) A certificate of compliance will be issued after the vegetation restoration plan requirements have been satisfied.

J. LAND ALTERATION STANDARDS AND STORMWATER MANAGEMENT

(1) **Purpose.** To establish standards that protect water quality from pollutant loadings of sediment, nutrients, bacteria, and other contaminants; and maintain stability of bluffs, shorelines, and other areas prone to erosion.

(2) Land alteration permit.

(A) Within the bluff impact zone, land alteration is prohibited, except for the following, which are allowed by permit.

i. Erosion control consistent with Section 152.530(J)(6);

ii. The minimum necessary for development that is allowed as an exception under Section 152.530(L); and

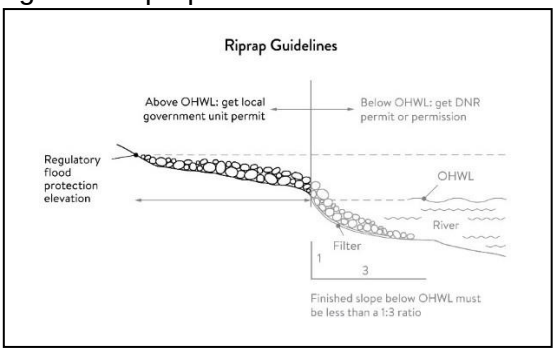
iii. Repair and maintenance of existing buildings and facilities.

(B) Within the water quality impact zone, land alteration that involves more than ten cubic yards of material or affects an area greater than 1,000 square feet requires a permit.

(3) Rock riprap, retaining walls, and other erosion control structures.

(A) Construction, repair, or replacement of rock riprap, retaining walls, and other erosion control structures located at or below the OHWL must comply with Minnesota Rules, chapters 6115.0215, subpart 4, item E, and 6115.0216, subpart 2. Work must not proceed until approved by the commissioner. See Figure 8.

Figure 8. Riprap Guidelines



(B) Construction or replacement of rock riprap, retaining walls, and other erosion control structures within the bluff impact zone and the water quality impact zone are allowed with a permit consistent with provisions of Section 152.530(K)(6) provided that:

i. If the project includes work at or below the OHWL, the commissioner has already approved or permitted the project.

ii. The structures are used only to correct an established erosion problem as determined by the City Manager.

iii. The size and extent of the structures are the minimum necessary to correct the erosion problem and are not larger than the following, unless a professional engineer determines that a larger structure is needed to correct the erosion problem:

(a) Retaining walls must not exceed five feet in height and must be placed a minimum horizontal distance of ten feet apart; and

(b) Riprap must not exceed the height of the regulatory flood protection elevation.

(C) Repair of existing rock riprap, retaining walls, and other erosion control structures above the OHWL does not require a permit provided it does not involve any land alteration under Section 152.530(J)(2).

(4) Stormwater management.

(A) In the bluff impact zone, storm water management facilities are prohibited**,** except by permit if:

i. There are no alternatives for storm water treatment outside the bluff impact zone on the subject site;

ii. The site generating runoff is designed so that the amount of runoff reaching the bluff impact zone is reduced to the greatest extent practicable;

iii. The construction and operation of the facility does not affect slope stability on the subject property or adjacent properties; and

iv. Mitigation based on the best available engineering and geological practices is required and applied to eliminate or minimize the risk of slope failure.

(B) In the water quality impact zone, development that creates new impervious surface, as allowed by exemption in Section 152.530(L), or fully reconstructs existing impervious surface of more than 1 acre requires a storm water permit or approved storm water plan. Multipurpose trails and sidewalks are exempt if there is down gradient vegetation or a filter strip that is at least five feet wide.

(C) In all other areas, storm water runoff must be directed away from the bluff impact zones or unstable areas.

(5) **Development on steep slopes**. Construction of structures, impervious surfaces, land alteration, vegetation removal, or other construction activities are allowed on steep slopes if:

(A) The development can be accomplished without increasing erosion or storm water runoff;

(B) The soil types and geology are suitable for the proposed development; and

(C) Vegetation is managed according to the requirements of Section 152.530(I).

(6) Conditions of land alteration permit approval.

(A) Temporary and permanent erosion and sediment control measures retain sediment onsite consistent with best management practices in the Minnesota Stormwater Manual;

(B) Natural site topography, soil, and vegetation conditions are used to control runoff and reduce erosion and sedimentation;

(C) Construction activity is phased when possible;

(D) All erosion and sediment controls are installed before starting any land disturbance activity;

(E) Erosion and sediment controls are maintained to ensure effective operation;

(F) The proposed work is consistent with the vegetation standards in Section 152.530(I); and

(G) Best management practices for protecting and enhancing ecological and water resources identified in Best Practices for Meeting DNR General Public Waters Work Permit GP 2004-0001.

(7) Compliance with other plans and programs. All development must:

(A) Be consistent with Minnesota Statutes, chapter 103B, and local water management plans completed under chapter 8410;

(B) Meet or exceed the wetland protection standards under Minnesota Rules, chapter 8420; and

(C) Meet or exceed the floodplain management standards under Minnesota Rules, chapter 6120. 5000 – 6120.6200

K. SUBDIVISION AND LAND DEVELOPMENT STANDARDS

(1) Purpose.

(A) To protect and enhance the natural and scenic values of the MRCCA during development or redevelopment of the remaining large sites

(B) To establish standards for protecting and restoring biological and ecological functions of primary conservation areas on large sites; and

(C) To encourage restoration of natural vegetation during development or redevelopment of large sites where restoration opportunities have been identified in MRCCA Plans.

(2) Applicability.

(A) The design standards in this section apply to subdivisions, planned unit developments and master-planned development and redevelopment of land involving ten or more acres for contiguous parcels that abut the Mississippi River and 20 or more acres for all other parcels, including smaller individual sites within the following developments that are part of a common plan of development that may be constructed at different times:

i. Subdivisions;

ii. Planned unit developments; and

iii. Master-planned development and redevelopment of land.

(B) The following activities are exempt from the requirements of this section:

i. Minor subdivisions consisting of three or fewer lots;

ii. Minor boundary line corrections;

iii. Resolutions of encroachments;

iv. Additions to existing lots of record;

v. Placement of essential services; and

vi. Activities involving river-dependent commercial and industrial uses.

(3) **Application materials.** Project information listed in Section 3.6 must be submitted for all proposed developments.

(4) Design standards.

(A) Primary conservation areas, where they exist, must be set aside and designated as protected open space in quantities meeting the following as a percentage of total parcel area:

i. CA-ROS District: 50%;

ii. CA-RN District: 20%;

iii. CA-RTC, CA-UM, and CA-UC Districts: 10%; and

iv. CA-SR District: 10% if the parcel includes native plant communities or provides feasible connections to a regional park or trail system, otherwise no requirement.

(B) If the primary conservation areas exceed the amounts specified in Section 152.530(K)(4)(A), then protection of native plant communities and natural vegetation in riparian areas shall be prioritized.

(C) If primary conservation areas exist but do not have natural vegetation (identified as restoration priorities in the MRCCA Plan), then a vegetation assessment must be completed to evaluate the unvegetated primary conservation areas and determine whether vegetation restoration is needed. If restoration is needed, vegetation must be restored according to Section 152.530(I)(6)(B).

(D) If primary conservation areas do not exist on the parcel and portions of the parcel have been identified in the MRCCA plan as a restoration area, vegetation must be restored in the identified areas according to Section 152.530(I)(6)(B) and the area must be set aside and designated as protected open space.

(E) Storm water treatment areas or other green infrastructure may be used to meet the protected open space requirements if the vegetation provides biological and ecological functions.

(F) Land dedicated under 151.061 Public Sites and Open Space and Park Land Dedication for public river access, parks, or other open space or public facilities may be counted toward the protected open space requirement.

(G) Protected open space areas must connect open space, natural areas, and recreational areas, where present on adjacent parcels, as much as possible to form an interconnected network.

(5) Permanent protection of designated open space.

(A) Designated open space areas must be protected through one or more of the following methods:

i. Public acquisition by a government entity for conservation purposes;

ii. A permanent conservation easement, as provided in Minnesota Statutes, chapter 84C;

iii. A deed restriction; and

iv. Other arrangements that achieve an equivalent degree of protection.

(B) Permanent protection methods must ensure the long-term management of vegetation to meet its biological and ecological functions, prohibit structures, and prohibit land alteration, except as needed to provide public recreational facilities and access to the river.

L. EXEMPTIONS

(1) **Purpose.** To provide exemptions to structure placement, height and other standards for specific river or water access dependent facilities as provided in Minnesota Statutes 116G.15 Subd. 4.

(2) Applicability.

(A) Uses and activities not specifically exempted must comply with this section. Uses and activities exempted under shore impact zone and bluff impact zone must comply with the vegetation management and land alteration standards in Sections 9 and 10.

(B) Uses and activities in Section 152.530(L)(3) are categorized as:

i. **Permitted - P.** This means that the use or activity is allowed;

ii. **Conditional - C** This means that the use or activity is allowed only if no alternatives exist, as a conditional use; and

iii. **Permitted with Additional Standards - S.** This means that a use or activity is not exempt and must meet the standards of this ordinance.

iv. **Not Permitted – NP.** The use is prohibited.

(3) Use and activity exemptions classification.

(A) General uses and activities.

Use or Activity	Set backs	Height Limits	SIZ	BIZ	Applicable standards with which the use or activity must comply
Industrial and utility structures requiring greater height for operational reasons (such as elevators, refineries and railroad signaling towers)	S	P	S	S	Structure design and placement must minimize interference with public river corridor views.
Barns, silos, and farm structures	S	P	S	S	
Bridges and bridge approach roadways	P	P	P	C	Section 152.530(H)
Wireless communication towers	NP	NP	S	S	Section 152.530(E)(2)(F)
Use or Activity	**Set backs**	**Height Limits**	**SIZ**	**BIZ**	**Applicable standards with which the use or activity must comply**
Chimneys, church spires, flag poles, public monuments, and mechanical stacks and equipment	S	P	S	S	
Historic properties and contributing properties in historic districts	P	P	P	P	Exemptions do not apply to additions or site alterations

(B) Public utilities.

Use or Activity	Set backs	Height Limits	SIZ	BIZ	Applicable standards with which the use or activity must comply
Electrical power facilities	P	P	P	C	Section 152.530(H)
Essential services (other than storm water facilities)	P	P	P	C	Section 152.530(H)
Storm water facilities	P	S	P	C	Section 152.530(J)
Wastewater treatment	P	S	P	NS	Section 152.530(H)
Public transportation facilities	P	S	C	C	Section 152.530(H)

(C) Public recreational facilities.

Use or Activity	Set backs	Height Limits	SIZ	BIZ	Applicable standards with which the use or activity must comply
Accessory structures, such as monuments, flagpoles, light standards, and similar park features	P	P	C	C	Section 152.530(H); within BIZ, only on slopes averaging less than 30%. Exemptions do not apply to principal structures.
Picnic shelters and other open-sided structures	P	S	C	S	Section 152.530(H)
Parking lots	C	S	C	C	Section 152.530(H); within BIZ, only within 20 feet of toe of bluff; not on face of bluff; and must not affect stability of bluff
Roads and driveways	C	S	C	C	Section 152.530(H)
Natural-surfaced trails, access paths, and viewing areas	P	S	P	P	Section 152.530(H)
Hard-surfaced trails and viewing platforms	P	S	P	C	Section 152.530(H); within BIZ, only on slopes averaging less than 30%
Water access ramps	P	S	P	C	Section 152.530(H)
Public signs and kiosks for interpretive or directional purposes	P	S	P	C	Section 152.530(H)

(D) River-dependent uses.

Use or Activity	Set backs	Height Limits	SIZ	BIZ	Applicable standards with which the use or activity must comply
Shoreline facilities	P	S[1]	P	C	Section 152.530(E)(2)(E). Exemptions do not apply to buildings, structures, and parking areas that are not part of a shoreline facility

[1] River-dependent commercial, industrial, and utility structures are exempt from height limits only if greater height is required for operational reasons.

Use or Activity	Set backs	Height Limits	SIZ	BIZ	Applicable standards with which the use or activity must comply
Private roads and conveyance structures serving river-dependent uses	P	S[1]	P	C)	Section 152.530(E)(2)(E)

(E) Private residential and commercial water access and use facilities.

Use or Activity	Set backs	Height Limits	SIZ	BIZ	Applicable standards with which the use or activity must comply
Private roads serving 3 or more lots	C	S	S	C	Section 152.530(I); in BIZ, only on slopes averaging less than 30%. Exemption does not apply to private roads serving fewer 3 lots or to private driveways and parking areas
Access paths	P	S	P	P	Section 152.530(I)
Water access ramps	P	S	P	S	Section 152.530(I)
Stairways, lifts, and landings	P	S	P	P	Section 152.530(I)
Water-oriented accessory structures	P	S	P	S	Section 152.530(I)
Patios and decks	P	S	N	S	Section 152.530(I)(5)
Directional signs for watercraft (private)	P	S	P	S	Section 152.530(I)(6); exemption does not apply to off-premise advertising signs
Temporary storage of docks, boats, and other equipment during the winter months	P	S	P	S	
Erosion control structures, such as rock riprap and retaining walls	P	S	P	C	Sections 152.530(J)(3), 152.530(J)(5) and 152.530(J)(6)
Flood control structures	P	S	P	C	Section 152.530(J)

152.008 Definitions

Access path. An area designated to provide ingress and egress to public waters.

Use, Agricultural. A use having the meaning given under Minnesota Statutes, section 40A.02.

Alternative design. Subdivision design methods such as conservation design, transfer of development density, or similar zoning and site design techniques that protect open space and natural areas.

Barge fleeting. Temporarily parking and securing barges on the river, on or off channel, while tows are assembled or broken up.

Biological and ecological functions. The functions of vegetation in stabilizing soils and slopes, retaining and filtering runoff, providing habitat, and recharging groundwater.

Figure 1.

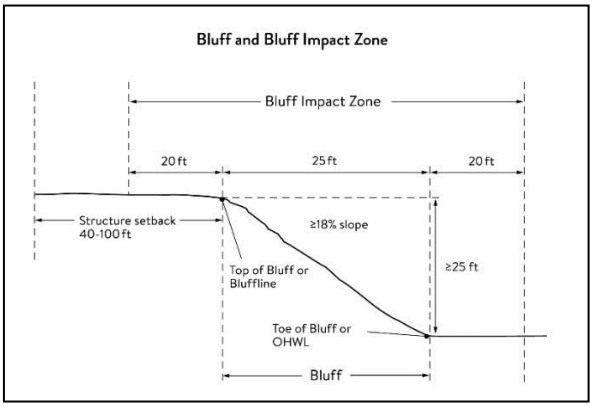
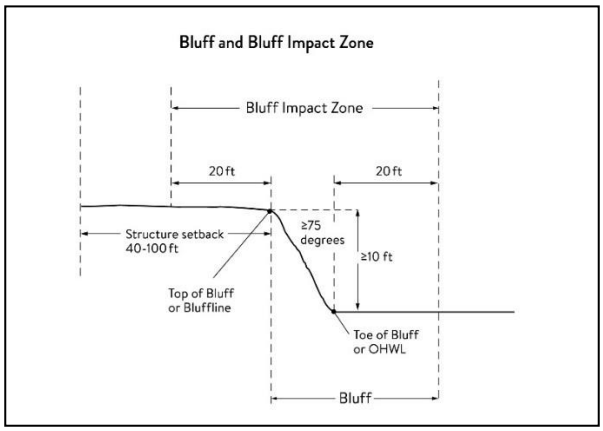


Figure 2.



Bluff impact zone (BIZ). A bluff and land located within 20 feet of the bluff. See Figures 1 and 2.

Bluffline. A line delineating the top of the bluff. More than one bluffline may be encountered proceeding landward from the river. See Figures 1 and 2.

Bluff, Toe of. A line along the bottom of a bluff, requiring field verification, such that the slope above the line exceeds 18 percent and the slope below the line is 18 percent or less, measured over a horizontal distance of 25 feet. See Figures 1 and 2.

Bluff, Top of. A line along the top of a bluff, requiring field verification, such that the slope below the line exceeds 18 percent and the slope above the line is 18 percent or less, measured over a horizontal distance of 25 feet. See Figures 1 and 2.

Commissioner. The commissioner of the Minnesota Department of Natural Resources.

Conservation design. A pattern of subdivision that is characterized by grouping lots within a portion of a parcel, where the remaining portion of the parcel is permanently protected as open space.

Conventional subdivision. A pattern of subdivision that is characterized by lots that are spread regularly throughout a parcel in a lot and block design.

Deck. A horizontal, unenclosed, aboveground level structure open to the sky, with or without attached railings, seats, trellises, or other features, attached or functionally related to a principal use or site.

Developer. Any person, including a governmental agency, undertaking any development as defined in Minnesota Statutes 116G.01 to 116G.14, as defined in Minnesota Statutes, section 116G.03.

Discretionary action. An action under this chapter related to land use that requires a public hearing by local ordinance or statute, such as preliminary plats, final subdivision plats, planned unit developments, conditional use permits, interim use permits, variances, appeals, and rezonings.

Dock. A narrow platform or structure extending waterward from the shoreline intended for ingress and egress for moored watercraft or seaplanes or to provide access to deeper water for swimming, fishing or other water-oriented recreational activities, as definedin Minnesota Rules, chapter 6115.

Electric power facilities. Equipment and associated facilities for generating electric power or devices for converting wind energy to electrical energy as identified and defined under Minnesota Statutes, section 216E.

Essential services. Underground or overhead gas, electrical, communications, steam, or water distribution, collection, supply, or disposal systems, including storm water. Essential services include poles, wires, mains, drains, pipes, conduits, cables, fire alarm boxes, traffic signals, hydrants, navigational structures, aviation safety facilities or other similar equipment and accessories in conjunction with the systems. Essential services does not include buildings, treatment works as defined in Minnesota Statutes, chapter 115.01, electric power facilities or transmission services.

Feedlot. A lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising or holding of animals and specifically designed as a confinement area in which

manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure, as defined in Minnesota Rules chapter 7020.

Fully reconstructs. Areas where impervious surfaces have been removed down to the underlying soils. Activities such as structure renovation, mill and overlay projects, and other pavement rehabilitation projects that do not expose the underlying soils beneath the structure, pavement, or activity are not considered fully reconstructed. Maintenance activities such as catch basin repair/replacement, utility repair/replacement, pipe repair/replacement, lighting, and pedestrian ramp improvements are not considered fully reconstructed.

Hard-surface trail. A trail surfaced in asphalt, crushed aggregate, or other hard surface, for multi-purpose use, as determined by local, regional, or state agency plans.

Historic property. An archaeological site, standing structure, site, district, or other property that is:

A. Listed in the National Register of Historic Places or the State Register of Historic Places or locally designated as a historic site under Minnesota Statutes, section 471;

B. determined to meet the criteria for eligibility to the National Register of Historic Places or the State Register of Historic Places as determined by the director of the Minnesota Historical Society; or

C. An unplatted cemetery that falls under the provisions of Minnesota Statutes, section 307, in consultation with the Office of the State Archaeologist

Impervious surface. The area of a lot, above the ordinary high water level, covered with buildings including all appurtenances, driveways and sidewalks, and similar impervious materials. For the purpose of this chapter, driveways that have a gravel base shall be considered impervious. Decks that allow drainage through the decking and that do not have a plastic weed barrier or some other material that would impede drainage into the ground and swimming pool water surface area shall not be considered impervious.

Intensive vegetation clearing. The removal of all or a majority of the trees or shrubs in a contiguous patch, strip, row, or block.

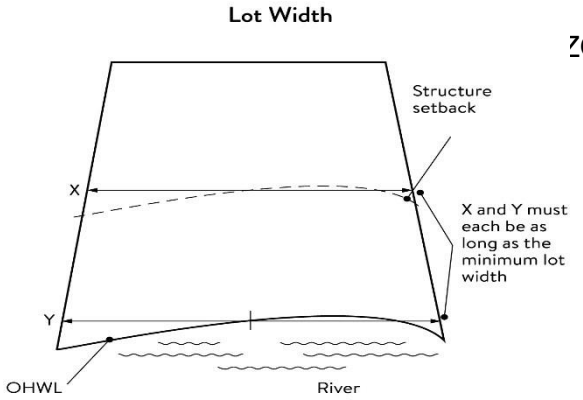
Land alteration. An activity that exposes the soil or changes the topography, drainage, or cross section of the land, excluding gardening or similar minor soil disturbances.

Local government. Counties, cities, and townships.

Local park agencies. The Minneapolis Park and Recreation Board and the Three Rivers Park District.

Lot width (MRCCA). The shortest distance between lot lines measured at both the ordinary high water level and at the required structure setback from the ordinary high water level. See Figure 3.

Figure 3. Lot Width



Marina. An inland or offshore commercial mooring facility for the concentrated mooring of seven or more watercraft or seaplanes wherein commercial ancillary services common to marinas are provided, as defined in Minnesota Rules chapter 6115.

~~***MISSISSIPPI RIVER CRITICAL AREA.*** The Mississippi River and adjacent lands in the Twin Cities region were designated a Critical Area by the State of Minnesota under the Critical Areas Act. Executive Order No. 79-19 established the Mississippi River Critical Area.~~

Mississippi River Corridor Critical Area (MRCCA). The area within the River Corridor Boundary (See Section 2.680).

Mississippi River Corridor Critical Area (MRCCA) Plan. A chapter or other element in the *Brooklyn Park* Comprehensive Plan.

Mooring facility. A concentrated area intended solely for the mooring or containment of seven or more watercraft or seaplanes by docks, mooring buoys, or other means, as defined in Minnesota Rules chapter 6115.0170.

Native plant community. A plant community identified by the Minnesota Biological Survey or biological survey issued or adopted by a local, state, or federal agency.

Natural-surface trail. A trail composed of native soil and rock or compacted granular stone, primarily intended for hiking, equestrian, or mountain bike use, as determined by local, regional, or state agency plans.

Natural vegetation. Any combination of ground cover, understory, and tree canopy that, while it may have been altered by human activity, continues to stabilize soils, retain and filter runoff, provide habitat, and recharge groundwater.

Nonmetallic mining. Construction, reconstruction, repair, relocation, expansion, or removal of any facility for the extraction, stockpiling, storage, disposal, or reclamation of nonmetallic minerals such a stone, sand, and gravel. Nonmetallic mining does not include ancillary facilities such as access roads, bridges, culverts, and water level control structures. For purposes of this subpart, “facility” includes all mine pits, quarries, stockpiles, basins, processing structures and equipment, and any structures that drain or divert public waters to allow mining.

Patio. A constructed hard surface located at ground level with no railings and open to the sky.

Picnic shelter. A roofed structure open on all sides, accessory to a recreational use.

Plat. Having the meaning given under Minnesota Statutes, sections 505 and 515B.

Port. A water transportation complex established and operated under the jurisdiction of a port authority according to Minnesota Statutes, section 458.

Primary conservation areas. Key resources and features, including shore impact zones, bluff impact zones, floodplains, wetlands, gorges, areas of confluence with tributaries, natural drainage routes, unstable soils and bedrock, native plant communities, cultural and historic properties, and significant existing vegetative stands, tree canopies, and other resources identified in local government plans.

Private facilities. Private roads, driveways, and parking areas, private water access and viewing facilities, decks and patios in setback areas, and private signs.

Professional engineer. An engineer licensed to practice in Minnesota.

Public facilities. Public utilities, public transportation facilities, and public recreational facilities.

Public recreation facilities. Recreational facilities provided by the state or a local government and dedicated to public use, including parks, scenic overlooks, observation platforms, trails, docks, fishing piers, picnic shelters, water access ramps, and other similar water-oriented public facilities used for recreation.

Public river corridor views. Views toward the river from public parkland, historic properties, and public overlooks, as well as views toward bluffs from the ordinary high water level of the opposite shore, as seen during the summer months and documented in the MRCCA plan/chapter of the comprehensive plan.

Public transportation facilities. All transportation facilities provided by federal, state, or local government and dedicated to public use, such as roadways, transit facilities, railroads, and bikeways.

Public waters. Having the meaning given under Minnesota Statutes, section 03G.005.

Readily visible. Land and development that are easily seen from the ordinary high water level of the opposite shore during summer months.

Resource agency. A federal, state, regional, or local agency that engages in environmental, natural, or cultural resource protection or restoration activities, including planning, implementation, and monitoring.

Rock Riprap. Natural coarse rock placed or constructed to armor shorelines, streambeds, bridge abutments, pilings and other shoreline structures against scour, or water or ice erosion.

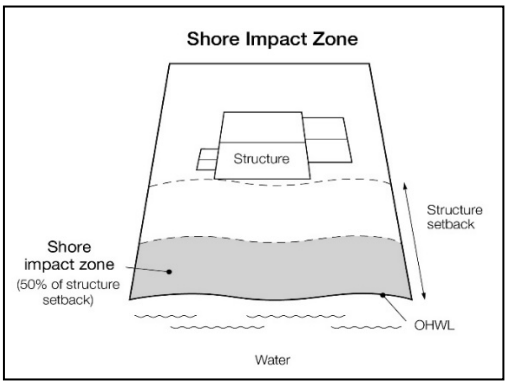
River corridor boundary. The boundary approved and adopted by the Metropolitan Council under Minnesota Statutes, section 116G.06, as approved and adopted by the legislature in Minnesota Statutes, section 116G.15, and as legally described in the Sate Register, volume 43, pages 508 to 518.

River-dependent use. The use of land for commercial, industrial, or utility purposes, where access to and use of a public water feature is an integral part of the normal conduct of business and where the use is dependent on shoreline facilities.

Selective vegetation removal. The removal of isolated individual trees or shrubs that are not in a contiguous patch, strip, row, or block and that does not substantially reduce the tree canopy or understory cover.

Shore impact zone (SIZ). Land located between the ordinary high water level of public waters and a line parallel to it at a setback of 50 percent of the required structure setback or, for agricultural use, 50 feet landward of the ordinary high water level. See Figure 4.

Figure 4. Shore Impact Zone



Shoreline facilities. Facilities that require a location adjoining public waters for ingress and egress, loading and unloading, and public water intake and outflow, such as barge facilities, port facilities, commodity loading and unloading equipment, watercraft lifts, marinas, short-term watercraft mooring facilities for patrons, and water access ramps. Structures that would be enhanced by a shoreline location, but do not require a location adjoining public waters as part of their function, are not shoreline facilities, such as restaurants, bait shops, and boat dealerships.

Special purpose units of government. The University of Minnesota, the St. Paul Port Authority, watershed management organizations established under Minnesota Statutes, chapter 103B, watershed districts established under Minnesota Statutes, chapter 103D, and any other unit of government other than local government or a state or regional agency.

State or regional agency. The Metropolitan Airports Commission, Minnesota Historical Society, University of Minnesota, Department of Natural Resources, Department of Transportation, Metropolitan Council and other state agencies.

Steep slope. A natural topographic feature with an average slope of 12 to 18 percent, measured over a horizontal distance equal to or greater than 50 feet, and any slopes greater than 18 percent that are not bluffs.

Storm water management facilities. Facilities for the collection, conveyance, treatment, or disposal of storm water.

Subdivision. Having the meaning given under Minnesota Statutes, section 462.352.

Subsurface sewage treatment system (SSTS). Having the meaning given under Minnesota Rules, part 7080.1100.

Transmission services.

A. Electric power lines, cables, pipelines, or conduits that are:

(1) used to transport power between two points, as identified and defined under Minnesota Statutes, section 216E.01, subdivision 4; or

(2) For mains or pipelines for gas, liquids, or solids in suspension, used to transport gas, liquids, or solids in suspension between two points; and

B. Telecommunication lines, cables, pipelines, or conduits.

Treeline. The line formed by the tops of trees in a wooded area when viewed from a particular point. The treeline is determined during all seasons as if under full foliage.

Twin Cities Metropolitan area. The area over which the Metropolitan Council has jurisdiction according to Minnesota Statutes, section 473.121 subdivision 2.

Variance. Having the meaning given under Minnesota Statutes, section 394.22.

Water access ramp. A boat ramp, carry-down site, boarding dock, and approach road, or other access that allows launching and removal of a boat, canoe, or other watercraft with or without a vehicle and trailer.

Water-oriented accessory structure. A small building or other improvement, except stairways, fences, docks, and retaining walls, that, because of the relationship of its use to public waters, needs to be located closer to public waters than the normal structure setback. Examples include gazebos, screen houses, fish houses, pump houses, and detached decks and patios.

Water quality impact zone. Land within the shore impact zone or within 50 feet of the boundary of a public water, wetland, or natural drainage way, whichever is greater.

Wetland. Land transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water, as defined in Minnesota Statutes, section 103G.005.

Wharf. A permanent structure constructed into navigable waters as part of a port facility for berthing or mooring commercial watercraft, or for transferring cargo to and from watercraft in an industrial or commercial enterprise, or for loading or unloading passengers from commercial watercraft, or for the operation of a port facility, as defined in Minnesota Rules, part 6115.0170.

DEPARTMENT OF NATURAL RESOURCES

Ecological and Water Resources
1801 South Oak Street
Lake City, MN 55041

July 05, 2023

Erin McDermott
Associate Planner
City of Brooklyn Park
5200 85th Avenue N
Brooklyn Park, MN 55443

Re: Conditional Approval of Brooklyn Park's MRCCA Ordinance

Dear Ms. McDermott:

Thank you for sending your proposed Mississippi River Corridor Critical Area (MRCCA) ordinance and administrative forms and procedures (administrative checklist items) to the Minnesota Department of Natural Resources (DNR) on 5/25/20323. We have found that the ordinance is substantially consistent with Minnesota Statutes, §116G and Minnesota Rules, chapter 6106. The submitted administrative forms and procedures demonstrate that the City is ready to administer the ordinance once it is adopted. I am pleased to inform you that the proposed ordinance is hereby approved, provided all of the conditions of approval in this letter are met. The City may now adopt the ordinance. Minnesota Rules 6106.0070 Subp.3.G. require local governments to adopt the ordinance within 60-days of DNR approval.

Conditions of Approval

The following conditions must be met before the DNR will issue final approval:

1. Please provide the adopted amended general definitions for verification, as noted within the comments in the attached draft ordinance.
2. Edit all placeholder phrases prior to adoption, as noted within the comments in the attached draft ordinance.

Next Steps

Following are the steps for completing and receiving final DNR approval for your ordinance:

1. Revise the ordinance based on the conditions listed above under conditional approval.
2. The City Council adopts the ordinance.
3. Email the completed Ordinance Processing Checklist (attached) and the documents identified on the checklist within 10 days of City Council adoption to:
    a. Wes Saunders-Pearce; wes.saunders-pearce@state.mn.us
    b. Ordinance.review.dnr@state.mn.us

4. We will review the ordinance adopted by the City Council for consistency with the ordinance that received conditional approval. We will also send a copy to the National Park Service and the Metropolitan Council as required by rule.
5. If the adopted ordinance is consistent, I will send you a "final approval" letter. Under Minnesota Statutes, §116G Subd. 8 (e), only ordinances receiving final approval from the commissioner have the force and effect of law.

A MRCCA ordinance is an important land use regulation that helps to protect surface water quality, near shore habitat, and scenic character of the MRCCA. We appreciate your efforts to protect these resources for all present and future Minnesotans. Wes Saunders-Pearce is available to assist with ordinance technical guidance and to consult with you on other land and water-related projects.

Sincerely,

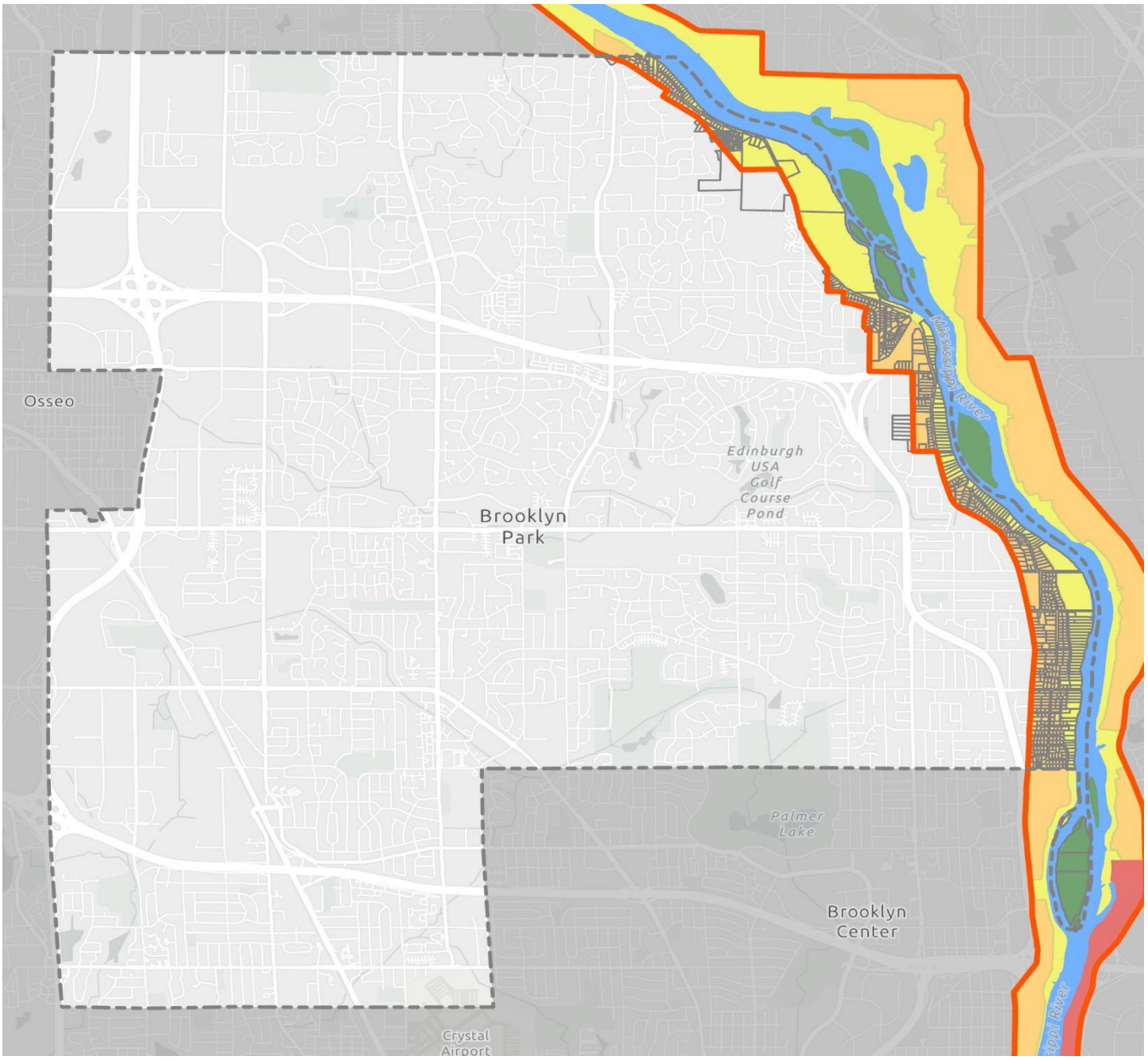


Megan Moore
District Manager – Ecological and Water Resources

Attachments:

Proposed Ordinance with DNR Comments
MRCCA Ordinance Processing Checklist

c: Wes Saunders-Pearce, DNR Area Hydrologist
Raya Esmaeili, Metropolitan Council
Adam Muilenburg, National Park Service
Ordinance.review.dnr@state.mn.us



MRCCA Text Amendment
Case #24-102
MRCCA area within the City of Brooklyn Park

Brooklyn Park



City of Brooklyn Park
City Hall
5200 85th Ave. N.
Brooklyn Park, MN 55443
763-424-8000
www.brooklynpark.org

January 10, 2024

Dear Brooklyn Park resident,

Thank you for choosing to live in the City of Brooklyn Park! It is residents like yourself who make the city a vibrant place to live. With over 86,000 residents, Brooklyn Park is the sixth largest city in the state and rich with diversity and beautiful spaces. We continue to strive towards the vision statement of a thriving community inspiring pride where opportunities exist for all.

In 2017, the Minnesota Legislature passed a law requiring all cities within the Mississippi River Corridor Critical Area (MRCCA) to adopt updated regulations protecting the river. In February, the City of Brooklyn Park plans to adopt these standards into the Zoning Ordinance to comply with state law.

You are receiving this letter because your property has been identified as being located within the MRCCA.

The MRCCA has been in place since 1976, so properties along the river have been subject to protections for nearly 50 years. Adopting the updated rules developed by the Department of Natural Resources into the City's zoning ordinance will result in additional transparency for property owners and make it easier for the City to administer the required rules, cutting down on processing time when homeowners apply for building permits.

Where can I view the proposed text amendment?

The text amendment and other informative documents, such as the Zoning Map, are available on the City website at www.brooklynpark.org/planning-zoning-and-development

What does this mean for me as a property owner?

- **This will give you access to all review standards for the MRCCA zoning requirements.** These standards were previously enforced by the DNR and will now be readily available within the Brooklyn Park Zoning Ordinance.
- **The City will be your primary contact for vegetative clearing permits.** Previously this fell under the jurisdiction of the DNR, but with new regulation the City will issue permits for extensive vegetative clearing in the MRCCA.
- **For a more in depth explanation of this update, the DNR has prepared a Statement Of Need and Reasonableness (SONAR) explaining the necessity of this update.** The SONAR can be located here: https://files.dnr.state.mn.us/input/rules/rulemaking/mrcca/sonar.pdf

If you have any questions, I can be reached at erin.mcdermott@brooklynpark.org.

Sincerely,

Erin McDermott

Erin McDermott, Associate Planner

From: Paul Mogush
Sent: Wednesday, February 7, 2024 11:52 AM
To: 'Joe Klohs' <jklohs@live.com>
Cc: Eric Duncan <ebduncan@comcast.net>; Christian Eriksen <Christian.Eriksen@brooklynpark.org>; Xp Lee <Xp.Lee@brooklynpark.org>; Tony McGarvey <Tony.McGarvey@brooklynpark.org>; Jay Stroebel <Jay.Stroebel@BrooklynPark.Org>; Kimberly Berggren <Kimberly.Berggren@brooklynpark.org>; Katrina Dosher <Katrina.Dosher@brooklynpark.org>; Jesse Struve <Jesse.Struve@BrooklynPark.Org>; Dan Ruiz <Dan.Ruiz@BrooklynPark.Org>
Subject: RE: MRCCA - Update of regulation for Brooklyn Park

Mr. Klohs,

I appreciate these thoughtful questions. I think there will be a lot of interest from others in knowing the answers to your questions, so I'm putting them in an email here that will be distributed to the mayor and council. Feel free to share with others, and we'll include this in the Planning Commission and Council reports on the ordinance update as well. Answers related to the code update are from me, and those related to funding/erosions/stormwater are from colleagues in Engineering. If you still have follow-up questions, feel free to give me a call.

- City appears to be late to the table to update regulations to be in compliance.

  This is true. We are behind in bringing the ordinance update forward because of staffing turnover in the Planning Division and many competing priorities. We're glad to be bringing it forward now so that the City can be in compliance and property owners can have transparency regarding the DNR rules.

- Unable to find a copy of the proposed version for review – not available on city site or proposed agenda – meeting is less than a week away

  It was posted on the web site when the letter went out to property owners a few weeks ago. Here is a link: https://www.brooklynpark.org/planning-zoning-and-development/2024-land-usage-code-update/

- Involvement of the city to support acquisition funding/funds/grants for improvements to private landowners riverbanks – many other neighboring cities have received funds – not Brooklyn Park

  The City submitted three Clean Water Funds to the Board of Soil and Water Resources since 2020. In the most recent application, the West Mississippi Watershed Management Commission became an active partner assisting with writing the grant and providing funds to match with state funds. Although unsuccessful in garnering the larger Clean Water Fund grant, they were able to appropriate approximately $60,000 in a different, non-competitive state grant. Based on feedback we received from the granting agency, the Commission, county, and city staff thought it best to further define the suite of stabilization methods needed for restoration and get a better handle on the estimated cost.

- What is the cities action plan including timeline to support the acquisition of funds similar the neighboring cities

  With the $60,000 state grant dollars, the West Mississippi Watershed Management Commission is completing more survey work to better define the scope of erosion that is occurring, what the erosive sources may be, and what infrastructure (e.g. homes, other structures, drainage pipes, etc.) would likely be affected in the future. This information will then be used to draft preliminary designs in the highest priority area(s). These designs will outline specific restoration activities and specific locations, and could be used by landowners to engage contractors to complete the work and/or be used as a supplement to another grant application.

- Why is the city far behind the curve in initiating/submitting their plan?

  I think this is answered above, but happy to answer any additional questions.

- Is the cities use of wetlands near 9100 West River Road for storm water retention contributing to the springs and problematic water problems for residents

  With the reconstruction of West River Road in 2002/2003, a stormwater treatment pond was installed at the north end of Jewell Park to improve water quality and control the rate of runoff to the wetland area. Prior to the reconstruction, West River Road did not have curb and gutter installed in this area allowing drainage from the roadway direct runoff to the wetland.

- Problematic/acceleration of riverbank deterioration has increased since the city diverted storm water to the wetlands near 9100 West River Road – will this be researched?

  The West Mississippi Watershed Management Commission is currently working to define the scope of erosion that is occurring, what the erosive sources may be and what infrastructure would likely be affected in the future.

- Will city funds be appropriated to resolve all riverbank erosion problems associated with the wetland use for storm water?

  The work being done currently by the West Mississippi Watershed Management Commission will be used to draft preliminary designs in the highest priority area(s). These designs will outline specific restoration activities and specific locations, and could be used by landowners to engage contractors to complete the work and/or be used as a supplement to another grant application. The City previously had appropriated some funding for the Clean Water Fund grant submittals.

- Property value impact

  I'm sure of the specific question, but from my perspective the combination of zoning regulations and proactive measures to protect the river (erosion control, etc) are important for protecting property values.

Paul Mogush *(he/him/his)*
Planning Director
763-493-8051
Brooklyn Park
Unique. United. Undiscovered.
www.brooklynpark.org
5200 85th Avenue N, Brooklyn Park, MN 55443

From: Joe Klohs <jklohs@live.com>
Sent: Tuesday, February 6, 2024 2:56 PM
To: Tony McGarvey <Tony.McGarvey@brooklynpark.org>; Paul Mogush <Paul.Mogush@brooklynpark.org>
Cc: Eric Duncan <ebduncan@comcast.net>; Christian Eriksen <christian@eriksenforbrooklynpark.com>; Xp Lee <Xp.Lee@brooklynpark.org>
Subject: MRCCA - Update of regulation for Brooklyn Park

Tony and Paul – can you provide a phone number and time I can call you regarding the upcoming meeting regarding the cities mandatory update to the MRCCA. I have been unable to contact

anyone in the planning department to ask questions I as well as numerous neighbors on the river have – several messages left.

- City appears to be late to the table to update regulations to be in compliance
- Unable to find a copy of the proposed version for review – not available on city site or proposed agenda – meeting is less than a week away
- Involvement of the city to support acquisition funding/funds/grants for improvements to private landowners riverbanks – many other neighboring cities have received funds – not Brooklyn Park
- What is the cities action plan including timeline to support the acquisition of funds similar the neighboring cities
- Why is the city far behind the curve in initiating/submitting their plan?
- Is the cities use of wetlands near 9100 West River Road for storm water retention contributing to the springs and problematic water problems for residents
- Problematic/acceleration of riverbank deterioration has increased since the city diverted storm water to the wetlands near 9100 West River Road – will this be researched?
- Will city funds be appropriated to resolve all riverbank erosion problems associated with the wetland use for storm water?
- Property value impact

Joe Klohs
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612-670-1801
joeklohs@gmail.com
Sent from Mail for Windows

City of Brooklyn Park
Planning Commission Staff Report

Agenda Item:	5.4	**Meeting Date:**	February 14, 2024
Agenda Section:	Public Hearings	**Originating Department:**	Community Development
Resolution:			
Ordinance:	X	**Prepared By:**	Erin McDermott, Associate Planner
Attachments:	1	**Presented By:**	Erin McDermott, Associate Planner
Item:	Zoning Code Text Amendment: 152.5XX Crystal Airport Zoning Overlay		

Proposed Action:

MOTION _____ SECOND _____ TO RECOMMEND APPROVAL OF AN ORDINANCE AMENDING CHAPTER 152 OF THE BROOKLYN PARK CODE OF ORDINANCES PERTAINING TO THE AIRPORT OVERLAY DISTRICT.

Staff Recommendation:

Staff recommends approval of proposed ordinance changes.

Overview:

In September 2021 the City Council adopted Resolution #2021-132 joining the JAZB and appointing two members to represent Brooklyn Park, City Councilmember Wynfred Russell (replaced in 2023 by Councilmember Maria Tran) and Planning Director Paul Mogush. In 2023, property owners received notification from the MAC regarding the proposed updated ordinance with an opportunity to testify at a public hearing before the Crystal Airport Joint Airport Zoning Board (JAZB). On November 8, 2023, the JAZB adopted the ordinance, following some changes in response to public comment.

Minnesota Statute 360.036 was adopted in 1983, which established a Joint Airport Zoning Board (JAZB) comprised of the Metropolitan Airports Commission (MAC) and the communities surrounding the Crystal Airport enacted a zoning ordinance intended to ensure the safety of airport operations by regulating land uses and building height near the runways. On July 28, 2021, the MAC notified the City of Brooklyn Park of an opportunity to join a newly constituted JAZB for the purpose of updating the airport zoning ordinance. There are two factors motivating the ordinance update. First, the legislature enacted changes to airport zoning statutes in 2019 that allow more flexibility in airport zoning ordinances than was allowed in 1983. Second, the MAC completed several changes to the layout of Crystal Airport in 2020, including lengthening the main runway and converting the parallel runway into a parallel taxiway.

The City of Brooklyn Park is now adopting these standards into the Zoning Ordinance in compliance with state law. The content of this text amendment contains the criteria previously established by Minnesota Statute 360.063, Subd. 3(2)(b) for which all current developments are being reviewed.

In addition to the adoption of the text approved by the JAZB, this zoning text amendment also formally establishes the Airport (AP) Overlay district which will be added as part of the upcoming Zoning Map amendment.

Technical Changes

The text amendment adds language to Code Sections 152.5XX and 152.5XX in which it establishes the AP Overlay, and articulates setbacks and guidelines for developed lots with text that provides in depth guidance for development and land uses within the AP Overlay district.

- Maximum structure height is articulated for each property within the AP Overlay.
- Land use restrictions are established.
- The FAA approval process for land use requests is outlined within this ordinance, as well as variance and appeal processes established.

This is a very technical ordinance, which is necessary to meet the requirements of state statute and the needs of aviation safety. The ordinance will have minimal practical effect on properties near the airport, because in most cases the maximum height of structures allowed by the airport ordinance exceeds the maximum height requirement of the underlying zoning. The land use restrictions of the airport ordinance are similarly more permissive than the underlying City of Brooklyn Park zoning.

Budgetary/Fiscal Issues:

Not applicable.

Alternatives to Consider:

1. Approve the text amendment as presented.
2. Approve the text amendment with modifications.
3. Decline to approve the text amendment.

Attachments:

5.1A Zoning Code Text Amendment: Crystal Airport Zoning Ordinance

152.5XX

A. PURPOSE AND AUTHORITY. The CRYSTAL Airport Joint Airport Zoning Board, created and established by joint action of the Metropolitan Airports Commission and the Cities of Crystal, Brooklyn Park, Brooklyn Center, Minneapolis, New Hope, and Robbinsdale, pursuant to the provisions and authority of Minnesota Statutes § 360.063, hereby finds and declares that:

(1) An Airport Hazard endangers the lives and property of users of the Airport and property or occupants of land in its vicinity, and also may reduce the size of the area available for the landing, takeoff, and maneuvering of aircraft, thus tending to destroy or impair the utility of the Airport and the public investment therein.

(A) The creation or establishment of an Airport Hazard is a public nuisance and an injury to the region served by the Airport.

(B) For the protection of the public health, safety, order, convenience, prosperity, and general welfare, and for the promotion of the most appropriate use of land, it is necessary to prevent the creation or establishment of Airport Hazards.

(C) The prevention of these Airport Hazards should be accomplished, to the extent legally possible, by the exercise of police power without compensation.

(D) The elimination or removal of existing land uses or their designation as nonconforming uses is not in the public interest and should be avoided whenever possible, consistent with reasonable standards of safety.

(E) In addition, the social and economic costs of disrupting land uses around the Airport often outweigh the benefits of a reduction in Airport Hazards, requiring a balance between the social and economic costs to surrounding communities and the benefits of regulation.

(F) Preventing the creation or establishment of Airport Hazards and eliminating, removing, altering, mitigating, or marking and lighting of existing Airport Hazards are public purposes for which political subdivisions may raise and expend public funds, levy assessments against land, and acquire land and property interests therein.

B. TITLE AND SHORT TITLE. This ordinance shall be known as the "Crystal Airport Zoning Ordinance."

C. DEFINITIONS AND RULES OF CONSTRUCTION

(1) **Definitions.** As used in this Crystal Airport Zoning Ordinance, unless otherwise expressly stated, or unless the context clearly indicates a different meaning, the words and phrases in the following list of definitions shall have the meanings indicated. All words and phrases not defined shall have their common meaning.

(A) **Airport.** "Airport" means Crystal Airport located in Hennepin County, Minnesota.

(B) **Airport Boundary.** "Airport Boundary" means the boundary shown on Exhibit A – Airport Boundary, attached hereto and made a part hereof.

(C) **Airport Hazard.** "Airport Hazard" means any Structure, Tree, or use of land that obstructs the airspace required for, or is otherwise hazardous to, the flight of aircraft in landing or taking off at the Airport; and, any use of land that is hazardous to Persons or property because of its proximity to the Airport.

(D) **Airport Zoning Permit.** "Airport Zoning Permit" means zoning permits as required under Section E(3).

(E) **Airspace Surfaces**. "Airspace Surfaces" means the surfaces established in Section D(1).

(F) **Airspace Zones.** "Airspace Zones" means the land use zones established in Section D(1).

(G) **Board of Adjustment.** "Board of Adjustment" means the body established in Section L.

(H) **Commissioner.** "Commissioner" means the Commissioner of the Minnesota Department of Transportation or, if either the position of Commissioner or the Minnesota Department of Transportation shall no longer exist or serve its present functions, such successor state official or officials or entity or entities as shall either singularly or collectively perform or serve such functions.

(I) **Crystal Airport Zoning Map.** "Crystal Airport Zoning Map" means the Crystal Airport Zoning Map as defined in Section F(3).

(J) **Effective Date.** "Effective Date" means the effective date set forth in Section M.

(K) **Existing.** "Existing" means the current layout of the airport environment, including alignment, location, and length of each runway at Crystal Airport at the time this Crystal Airport Zoning Ordinance on the Effective Date.

(L) **FAA.** "FAA" means the Federal Aviation Administration or, if the Federal Aviation Administration shall no longer exist or serve its present functions, such successor federal entity or entities as shall either singularly or collectively perform or serve such functions.

(M) **FAA 7460 Obstruction Evaluation.** Established FAA process for conducting aeronautical studies conducted under the provisions of Title 14 CFR, Part 77 (for proposed construction or alteration) or Federal Aviation Act of 1958 (for existing structures), or any successor to this process.

(N) **Lot.** "Lot" means a designated parcel, tract, or area of land established by plat or subdivision, or otherwise permitted by law.

(O) **Nonconforming Structure.** "Nonconforming Structure" means any Structure in existence in any Airspace Zone or Land Use Zone but not conforming to the provisions of this Crystal Airport Zoning Ordinance on the Effective Date.

(P) **Person.** "Person" means any individual, firm, partnership, corporation, company, association, joint stock association, or body politic, and includes a trustee, receiver, assignee, administrator, executor, guardian, or other representative.

(Q) **Runway.** "Runway" means any existing surface of the Airport which is specifically designated and used to be used for the landing and/or taking off of aircraft. The individual Runways at the Airport are defined in this Crystal Airport Zoning Ordinance based on the compass heading of landing and departing aircraft.

(R) **Runway 14-32.** "Runway 14 32" means the existing 3,750-foot non-precision primary runway. The Runway 14 end is within the City of Brooklyn Park, and the Runway 32 end is within the City of Crystal.

(S) **Runway 6L-24R.** "Runway 6L-24L" means the existing 2,500-foot visual crosswind runway. Both the Runway 6L and 24R ends are within the City of Crystal.

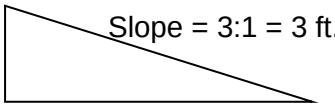
(T) **Runway 6R-24L.** "Runway 6R-24L" means the existing 1,669-foot visual crosswind runway. Both the Runway 6R and 24L ends are within the City of Crystal.

(U) **Runway Protection Zone.** "Runway Protection Zone" means a zone mandated by FAA regulations that is longitudinally centered on the extended centerline at each end of Runways 14-32, 6L-24R and 6R-24L, whose inner edge is at the same width and elevation as, and coincides with, the end of the Primary Surfaces for Runway 14-32 (500 feet), Runway 6L-24R (250 feet), and Runway 6R-24L (250 feet). The Runway 14-32 protection zone extends outward a horizontal distance of 1,000 feet, expanding uniformly to a width of 700 feet. Runways 6L-24R and 6R-24L have protection zones extending outward a horizontal distance of 1,000 feet, expanding uniformly to a width of 450 feet.

(V) **Land Use Zones.** "Land Use Zones" means the land use zones established in Section E(1).

(W) **School.** "School" means any private or public educational institution for people in kindergarten through grade 12 and any private or public day care or pre-school facility that enrolls more than 50 children.

(X) **Slope.** "Slope" means an incline from the horizontal expressed in an arithmetic ratio of horizontal magnitude to vertical magnitude.



(Y) **Structure.** "Structure" means anything anchored, attached, built, constructed, erected, gathered, located, placed, or piled on the ground or in or over a water body, whether temporary or permanent, moveable or immovable, including antennae, buildings, canopies, cranes, decks, derricks, docks, edifices, equipment, fences, overhead transmission lines, patios, piers, piles, ponds, posts, roadways, signs, smokestacks, towers, utility poles, wires, and anything attached to any of the foregoing either temporarily or permanently.

(Z) **Tree.** "Tree" means any object of natural growth.

(AA) **Zoning Administrator.** "Zoning Administrator" means the public official in each affected municipality as set forth in Section K(2).

(2) **Rules of Construction.** In the construction of this Crystal Airport Zoning Ordinance, the following rules shall be observed and applied, except where the context clearly indicates otherwise.

(A) **Computing Time.** In computing the period of time within which an act may or must be done, the first calendar day from which the designated period of time begins to run shall not be included. The last day of the period shall be included, unless it is a Saturday, a Sunday, or a legal holiday, in which case the period shall run until the end of the next day which is not a Saturday, Sunday, or legal holiday.

(B) **Conflicts Between Ordinance Provisions.** If a provision of this Crystal Airport Zoning Ordinance conflicts with any other provision of this Crystal Airport Zoning Ordinance, the more restrictive provision shall prevail.

(C) **Height.** "Height" shall be expressed as elevation in feet above Mean Sea Level, North American Vertical Datum, 1988 Adjustment, except in reference to maximum construction height without an Airport Zoning Permit when it shall be expressed as distance in feet above ground shown on the Maximum Construction Heights Without Permit Plates in the Crystal Airport Zoning Map.

(D) **Including, Not Limited To.** The word "including" means including but not limited to.

(E) **Land To Include Water Surfaces And Bodies.** The word "land" shall include water bodies and surfaces for the purpose of establishing Airspace Zones and Land Use Zones.

(F) **May, Permissive.** The word "may" is permissive.

(G) **Shall, Mandatory.** The word "shall" is mandatory and not discretionary.

(H) **Singular And Plural.** The singular shall include the plural, and the plural the singular.

(I) **Tense.** The present tense shall include the future.

D. AIRSPACE OBSTRUCTION ZONING

(1) **Airspace Surfaces And Zones.** In order to carry out the purpose of this Crystal Airport Zoning Ordinance as set forth in Section I., the following Airspace Surfaces and Airspace Zones are hereby established, subject to the airspace zoning limits in Section F(1).

(A) **Primary Surface.** An imaginary surface longitudinally centered on each Runway extending 200 feet beyond each end of Runways 14-32, 6L-24R, and 6R-24L. Runway 14-32 has uniform width of 500

feet, while Runways 6L-24R and 6R-24L have a uniform width of 250 feet. The elevation of any point on the Primary Surface is the same as the elevation of the nearest point on the Runway centerline.

(B) **Primary Zone.** All that land which lies directly under a Primary Surface.

(C) **Horizontal Surface.** An imaginary surface that is 1,019.3 feet above mean sea level, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the Primary Surface of each Runway and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is 5,000 feet for Runways 14-32, 6L-24R, and 6R-24L.

(D) **Horizontal Zone.** All that land which lies directly under the Horizontal Surface.

(E) **Conical Surface.** An imaginary surface extending upward and outward from the periphery of the Horizontal Surface at a Slope of 20 to 1 for a horizontal distance of 4,000 feet as measured radially outward from the periphery of the Horizontal Surface.

(F) **Conical Zone.** All that land which lies directly under the Conical Surface.

(G) **Approach Surface.** An imaginary surface longitudinally centered on the extended centerline at each end of Runways 14-32, 6L-24R, and 6R-24L. The inner edge of this surface is at the same width and elevation as, and coincides with, the end of the Primary Surface. For Runways 14-32, 6L-24R, and 6R-24L, this surface inclines upward and outward at a Slope of 20 to 1 for a horizontal distance of 5,000. For Runway 14-32, the outer width of this surface is 2,000 feet. For both Runways 6L-24R and 6R-24L, the outer width of this surface is 1,250 feet.

(H) **Approach Zone.** All that land which lies directly under an Approach Surface.

(I) Transitional Surface. An imaginary surface extending upward and outward at right angles to the centerline and extended centerline of Runways 14-32. 6L-24R, and 6R-24L at a Slope of 7 to 1 from both sides of each Primary Surface and from both sides of each Approach Surface of Runway 14-32, 6L-24R, and 6R-24L until it intersects the Horizontal Surface or the Conical Surface.

(J) **Transitional Zone.** All that land which lies directly under a Transitional Surface.

(2) **Height Restrictions.** Except as otherwise provided in this Crystal Airport Zoning Ordinance, and except as necessary and incidental to Airport operations, the following height restrictions shall apply. Where a Lot is beneath more than one Airspace Surface, the height of the more restrictive (lower) Airspace Surface shall control.

(A) **Structures.** No new Structure shall be constructed or established; and no existing Structure shall be altered, changed, rebuilt, repaired, or replaced in any Airspace Zone so as to project above any Airspace Surface. Nor shall any equipment used to accomplish any of the foregoing activities be allowed to project above any Airspace Surface.

(B) **Trees.** No Tree shall be allowed to grow or be altered, repaired, replaced, or replanted in any Airspace Zone so as to project above any Airspace Surface. Nor shall any equipment used to accomplish any of the foregoing activities be allowed to project above any Airspace Surface.

i. Public Nuisance; Order. If the whole or any part of any Tree shall be determined to be an Airport Hazard by the FAA, or any successor entity, after proper investigation, the Zoning Administrator may issue an order in writing for the owner or owners, agent or occupant of the property upon which such hazardous tree is located, to forthwith cause such hazardous tree, or portion thereof if the removal of a portion will remove the hazard, to be taken down and removed.

ii. Notice. Said order is to be mailed to the last known address of the owner, agent or occupant and shall be accompanied by a notice setting forth the authority to remove such hazardous Tree at such owner's, agent's or occupant's expense in the event such owner, agent or occupant fails to comply with or file a notice of appeal from said order within 10 days of mailing. The notice shall include instructions for filing a notice of appeal from said order.

iii. Removal. If within 10 days after said order has been mailed, as above provided for, the owner or

owners, agent or occupant of the property upon which such hazardous Tree is located neglects or refuses to comply with said order, or has failed to file a notice of appeal from said order with the Zoning Administrator, then the Administrator or its designee(s) may enter upon said premises and take down or remove said tree or portion thereof declared to be hazardous, and to do any and all things which in his opinion may be necessary for the protection of life, limb or property.

iv. Assessment of Expense. If, after the notice hereinbefore provided for has been given, the owner, agent or occupant has failed to remove such hazardous tree or portion thereof, and it becomes necessary for the Zoning Administrator to remove same, the Zoning Administrator or its designee shall mail a statement of the expense of such removal to the owner, agent or occupant of the property from which such tree or portion thereof has been removed, and if within 30 days therefrom the owner, agent or occupant has not remitted to the Zoning Administrator for the expense incurred by the Zoning Administrator in said removal, the Zoning Administrator or its designee may forthwith recover the amount of such expense from the owner or owners of said property in any civil court of competent jurisdiction, in the manner provided by law.

(3) **FAA 7460 Obstruction Evaluation.** All construction of new Structures or alteration of existing Structures in an Airspace Zone shall comply with the requirements for filing notice to the FAA under the FAA 7460 Obstruction Evaluation process.

E. LAND USE ZONING

(1) **Land Use Zones.** In order to carry out the purpose of this Crystal Airport Zoning Ordinance, as set forth in Section A., the following Land Use Zones are hereby established, subject to the land use zoning limits in Section F(2).

(A) **Land Use Zone 1.** Designated land, the extents of which are shown in Exhibit B. Land Use Zone 1 overlies the Runway Protection Zones.

(B) **Land Use Zone 2.** All land enclosed within the perimeter of the Horizontal Zone, as shown in Exhibit C, except that land within Land Use Zone 1.

(2) **Land Use Restrictions.**

(A) **General Restrictions.** Subject at all times to the height restrictions set forth in Section D(2). and the FAA 7460 Obstruction Evaluation process, no use shall be made of any land in any of the Land Use Zones that creates or causes interference with the operations of radio or electronic facilities at the Airport or with radio or electronic communications between Airport and aircraft, makes it difficult for pilots to distinguish between Airport lights and other lights, results in glare in the eyes of pilots using the Airport, impairs visibility in the vicinity of the Airport, is deemed a “hazard” to air navigation by FAA or MNDOT as part of an FAA 7460 Obstruction Evaluation, or otherwise endangers the landing, taking off, or maneuvering of aircraft.

(B) **Land Use Zone 1 Restrictions.** Subject at all times to the height restrictions set forth in Section D(2). and to the general restrictions contained in Section E(2)(1), areas designated as Land Use Zone 1 for each end of Runways 14-32, 6L-24R, and 6R-24L shall contain no buildings, exposed high-voltage transmission lines, or other similar land use structural hazards, and shall be restricted to those uses which will not create, attract, or bring together a dense, confined assembly of persons thereon. Permitted uses may include, but are not limited to, such uses as agriculture (seasonal crops), horticulture, animal husbandry, wildlife habitat, light outdoor recreation, cemeteries, roadways and vehicle parking, railroads, and other approved aeronautical uses. Where Land Use Zone 1 overlies the Runway Protection Zone, land uses and Structures within the Runway Protection Zone will be governed by Federal laws and regulations or by FAA advisory circulars, orders, or guidance.

(C) **Land Use Zone 2 Restrictions.** No land use in Land Use Zone 2 shall violate the height restrictions set forth in Section D(2). or the general restrictions contained in Section E(2)(1).

F. AIRPORT ZONING LIMITS AND CRYSTAL AIRPORT ZONING MAP

(1) **Airspace Zoning Limits.** Exhibit D – Airport Boundary and Airspace Zoning Limits and Exhibit E – Airport Boundary and Airspace Contours, attached hereto and made a part hereof, show these limits.

(2) **Land Use Zoning Limits.** Exhibit F – Airport Boundary and Land Use Zoning Limits, attached hereto and made a part hereof, shows these limits.

(3) **Crystal Airport Zoning Map.** The locations and boundaries of the Airspace Surfaces, Airspace Zones, Land Use Zones, and the Maximum Construction Heights without an Airport Zoning Permit established by this Crystal Airport Zoning Ordinance are set forth on the Crystal Airport Zoning Map consisting of 102 plates – Airspace Zones, Plates A-A2 to A-F6; Maximum Construction Heights Without Permit, Plates MCH-A2 to MCH-F6; and Land Use Zones, Plates SZ-A2 to SZ-F6 prepared by the Metropolitan Airports Commission, attached hereto and made a part hereof. These plates, together with such amendments thereto as may from time to time be made, and all notations, references, elevations, heights, data, surface and zone boundaries, and other information thereon, shall be and the same are hereby adopted as part of this Crystal Airport Zoning Ordinance.

G. NONCONFORMING USES

(1) **Crystal Airport Zoning Ordinance.** The provisions of this Crystal Airport Zoning Ordinance shall not be construed to require the removal, lowering, other change, or alteration of any Nonconforming Structure or Tree, or otherwise interfere with the continuance of any Nonconforming Use. Nonconforming Structures and Nonconforming Uses are permitted under this Crystal Airport Zoning Ordinance, subject to the provisions in Section H. (Airport Zoning Permits) and Section I. (Variances). Nothing herein contained shall require any change in the construction, alteration, or intended use of any Structure, the construction or alteration of which was begun prior to the Effective Date, and was diligently prosecuted and completed within 2 years of the Effective Date.

H. AIRPORT ZONING PERMITS

(1) **Permit Required.** The following activities shall not take place on a Lot in any Airspace Zone or Land Use Zone unless an Airport Zoning Permit shall have been granted therefore by the Zoning Administrator for the jurisdiction in which the Lot is located.

(A) **Existing Structures.** Except as specifically provided in Section H(2), no existing Structure shall be altered, changed, rebuilt, repaired, or replaced.

(B) **New Structures.** Except as specifically provided in Section H(2), no Structure shall be newly constructed or otherwise established.

(C) **Nonconforming Structures.** No Nonconforming Structure shall be replaced, substantially altered or repaired, or rebuilt.

(2) Exception To Permit Requirement.

(A) Maximum Construction Height Without A Permit. No Airport Zoning Permit shall be required for an existing Structure to be altered, changed, rebuilt, repaired, or replaced on a Lot, or for a new Structure to be constructed or otherwise established on a Lot, if the highest point on the Structure or on any equipment used to accomplish any of the foregoing activities, whichever is higher (measured in feet from curb level or from natural grade at a point 10 feet away from the front center of the Structure, whichever is lower) does not exceed the “maximum construction height above ground without an Airport Zoning Permit” shown for the Lot on the applicable Maximum Construction Heights Without Permit Plate in the Crystal Airport Zoning Map.

(B) No Violation Of Height Or Land Use Restriction Permitted. Nothing in this Section H(2). shall be construed as permitting or intending to permit a violation or a greater violation of any provision of this Crystal Airport Zoning Ordinance.

(3) Permit Application. An Airport Zoning Permit application for activities on a Lot shall be made in the manner and on the form established by the Zoning Administrator of the jurisdiction in which the Lot is located as designated in Section K(2).

(4) Permit Standard. An Airport Zoning Permit shall be granted unless the Zoning Administrator determines that granting the permit (1) would allow a conforming Structure or use to violate any provision of this Crystal Airport Zoning Ordinance or (2) would permit a Nonconforming Structure or a Nonconforming Use to become a greater violation of any provision of this Crystal Airport Zoning Ordinance. Any Airport Zoning Permit may be granted subject to any reasonable conditions that the Zoning Administrator may deem necessary to effectuate the purpose of this Crystal Airport Zoning Ordinance. In making any determination, the Zoning Administrator need not give public notice of, or hold a public hearing on, the Airport Zoning Permit application or the determination.

(5) Abandoned Or Deteriorated Nonconforming Uses. Whenever a Zoning Administrator determines that a Nonconforming Structure, Nonconforming Use, or Tree has been abandoned or more than 80% torn down, deteriorated, or decayed, no Airport Zoning Permit shall be granted that would allow such Nonconforming Structure, Nonconforming Use, or Tree to exceed the height restrictions of Section D(2). or otherwise violate any provision of this Crystal Airport Zoning Ordinance. Whether application is made for an Airport Zoning Permit or not, a Zoning Administrator may order the owner of the abandoned, torn down, deteriorated, or decayed Nonconforming Structure, Nonconforming Use, or Tree at the owner's expense, to lower, remove, reconstruct, or equip the same in the manner necessary to conform to the provisions of this Crystal Airport Zoning Ordinance. In the event the owner shall neglect or refuse to comply with such order for 10 days after receipt of written notice of such order, the Zoning Administrator may, by appropriate legal action, proceed to have the Nonconforming Structure, Nonconforming Use, or Tree lowered, removed, reconstructed, or equipped and assess the cost and expense thereof against the land on which the Nonconforming Structure, Nonconforming Use, or Tree is, or was, located. Unless such an assessment is paid within 90 days from the service of notice thereof on the owner of the land, the sum shall bear interest at the rate of 8% per annum from the date the cost and expense is incurred until paid, and shall be collected in the same manner as are general taxes, all as authorized by Minnesota Statutes § 360.067.

I. VARIANCES

(1) **Variance Application.** Any Person desiring to use his or her property in violation of any provision of this Crystal Airport Zoning Ordinance, whether to construct or establish a new Structure; to alter, change, rebuild, repair, or replace an existing Structure; to allow a Tree to grow higher; to alter, repair, replace, or replant a Tree; or to otherwise use his or her property in violation of any provision of this Crystal Airport Zoning Ordinance, may apply to the Board of Adjustment for a variance from such provision. A variance application shall be made by sending the application on the form provided by the Board of Adjustment by certified United States Mail to (1) the members of the Board of Adjustment and (2) the Board of Adjustment at the mailing address specified in Section L(3). The applicant shall also mail a copy of the application by regular United States Mail to the Zoning Administrator of the jurisdiction in which the Structure or property is located, as designated in Section K(2). The Board of Adjustment may charge a fee for processing the application.

(2) **Failure Of Board To Act.** If the Board of Adjustment fails to grant or deny the variance within 4 months after the last Board member receives the variance application, the variance shall be deemed to be granted by the Board of Adjustment, but not yet effective. When the variance is granted by reason of the failure of the Board of Adjustment to act on the variance, the Person receiving the variance shall send notice that the variance has been granted by certified United States Mail to (1) the Board of Adjustment at the mailing address specified in Section L(3). and (2) the Commissioner. The applicant shall include a copy of the original application for the variance with the notice to the Commissioner. The variance shall

be effective 60 days after this notice is received by the Commissioner, subject to any action taken by the Commissioner pursuant to Minnesota Statutes § 360.063, subd. 6.a.

(3) **Variance Standard.** A variance shall be granted where it is found that a literal application or enforcement of the provisions of this Crystal Airport Zoning Ordinance would result in practical difficulty or unnecessary hardship and relief granted would not be contrary to the public interest but do substantial justice and be in accordance with the spirit of this Crystal Airport Zoning Ordinance and Minnesota Statutes Chapter 360. Any variance granted may be granted subject to any reasonable conditions that the Board of Adjustment, or the Commissioner acting under Section I(2)., may deem necessary to effectuate the purpose of this Crystal Airport Zoning Ordinance or Minnesota Statutes Chapter 360.

J. HAZARD MARKING AND LIGHTING

(1) Nonconforming Structure. The Metropolitan Airports Commission may require the owner of any Nonconforming Structure to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Metropolitan Airports Commission to indicate the presence of the Structure to the operators of aircraft in the vicinity of the Airport. Such markers and lights shall be installed, operated, and maintained at the expense of the Metropolitan Airports Commission.

(2) Permits And Variances. Any Airport Zoning Permit or variance granted by a Zoning Administrator or the Board of Adjustment may, if such action is deemed advisable to effectuate the purpose of this Crystal Airport Zoning Ordinance and be reasonable in the circumstances, be granted subject to a condition that the owner of the Structure in question permit the Metropolitan Airports Commission, at its expense, to install, operate, and maintain thereon such markers and lights as may be necessary to indicate to pilots the presence of an Airport Hazard.

K. ZONING ADMINISTRATOR

(1) Duties. It shall be the duty of each Zoning Administrator to administer and enforce the provisions of this Crystal Airport Zoning Ordinance. Applications for Airport Zoning Permits shall be made to a Zoning Administrator as provided herein. A Zoning Administrator may charge a fee for processing the application. Airport Zoning Permit applications shall be considered and acted upon by the Zoning Administrator in accordance with the provisions of this Crystal Airport Zoning Ordinance and within the timelines established by Minnesota Statutes § 15.99, as it may be amended. The Zoning Administrator shall remind each applicant that it is the responsibility of the applicant to record any conditions of an Airport Zoning Permit, if required by law.

(2) Designated Zoning Administrators. For the purpose of this Crystal Airport Zoning Ordinance, the Zoning Administrator shall be the official entitled as follows: the Crystal Zoning Administrator for lands located in the City of Crystal; the Brooklyn Park Zoning Administrator for lands located in the City of Brooklyn Park; the Brooklyn Center Zoning Administrator for lands located in Brooklyn Center; the Minneapolis Zoning Administrator for lands located in Minneapolis; the New Hope Zoning Administrator for lands located in New Hope; and the Robbinsdale Zoning Administrator for lands located in Robbinsdale. In the event that 1 or more of the above-described Zoning Administrators fails to administer or enforce this Crystal Airport Zoning Ordinance as provided by law, the Crystal Airport Joint Airport Zoning Board hereby appoints the Metropolitan Airports Commission to administer or enforce this Crystal Airport Zoning Ordinance in the municipality or municipalities. If any official position designated above as a Zoning Administrator ceases to exist or to perform or serve its present function, the successor position as designated by the applicable entity shall become the Zoning Administrator for that entity and shall perform or serve such functions.

L. BOARD OF ADJUSTMENT

(1) Establishment Of Board And Selection Of Chair. There is hereby established a Board of Adjustment that shall consist of 5 members appointed by the Metropolitan Airports Commission, and each shall serve for a term of 3 years and until a successor is duly appointed and qualified. Of the members first appointed, 1 shall be appointed for a term of 1) year, 2 for a term of 2 years, and 2 for a term of 3 years. Upon their appointment, the members shall select a chair to act at the pleasure of the Board of Adjustment. Members shall be removable by the Metropolitan Airports Commission for cause, upon written charges, after a public hearing.

(2) Board Powers. The Board of Adjustment shall have the power to hear and decide appeals from any order, requirement, decision, or determination made by any Zoning Administrator or the Metropolitan Airports Commission in the enforcement of this Crystal Airport Zoning Ordinance and to hear and grant or deny variances.

(3) Board Procedures.

(A) Rules, Meetings, And Records. The Board of Adjustment shall adopt rules for its governance and procedure in harmony with the provisions of this Crystal Airport Zoning Ordinance. Meetings of the Board of Adjustment shall be held at the call of the chair and at such other times as the Board of Adjustment may determine. The chair, or in his or her absence the acting chair, may administer oaths and compel the attendance of witnesses. All hearings of the Board of Adjustment shall be public. The Board of Adjustment shall keep minutes of its proceedings showing the vote of each member upon each question or, if absent or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which shall immediately be filed in the offices of the Metropolitan Airports Commission and the Zoning Administrator of the jurisdiction in which the affected Structure or Lot is located, and shall be a public record.

(B) Written Findings And Conclusions. The Board of Adjustment shall make written findings of fact and conclusions of law giving the facts upon which it acted and its legal conclusions from such facts in affirming, modifying, or reversing an order, requirement, decision, or determination of a Zoning Administrator or the Metropolitan Airports Commission and in granting or denying a variance.

(C) Majority Vote Required. The concurring vote of a majority of the members of the Board of Adjustment shall be sufficient to affirm, modify, or reverse an order, requirement, decision, or determination of a Zoning Administrator or the Metropolitan Airports Commission, to decide to grant or deny a variance, or to act on any other matter upon which the Board of Adjustment is required to pass under this Crystal Airport Zoning Ordinance.

(D) Mailing Address. The mailing address for the Board of Adjustment is:

Crystal Airport Zoning Ordinance Board of Adjustment
c/o Executive Director
Metropolitan Airports Commission
6040 28th Avenue South
Minneapolis, MN 55450

M. APPEALS

(1) Who May Appeal. Any Person aggrieved, or any taxpayer affected by any order, requirement, decision, or determination of a Zoning Administrator made in administration of this Crystal Airport Zoning Ordinance may appeal to the Board of Adjustment. Such appeals may also be made by any governing body of a municipality or county, or any joint airport zoning board, which is of the opinion that an order, requirement, decision, or determination of a Zoning Administrator is an improper application of this Crystal Airport Zoning Ordinance as it concerns such governing body or board.

(2) Commencement Of Appeals. All appeals hereunder must be commenced within 30 days of a Zoning Administrator's decision by filing with the Zoning Administrator a notice of appeal specifying the grounds thereof. The Zoning Administrator shall forthwith transmit to the Board of Adjustment the notice of appeal and all papers constituting the record upon which the order, requirement, decision, or determination appealed from was taken.

(3) Stay Of Proceedings. An appeal shall stay all proceedings in furtherance of the order, requirement, decision, or determination appealed from, unless the Zoning Administrator certifies to the Board of Adjustment, after the notice of appeal has been filed with it, that by reason of the facts stated in the certificate a stay would, in the Zoning Administrator's opinion, cause imminent peril to life or property. In such case, proceedings shall not be stayed except by order of the Board of Adjustment on notice to the Zoning Administrator and on due cause shown.

(4) Appeal Procedures. The Board of Adjustment shall fix a reasonable time for hearing an appeal, give public notice and due notice to the parties in interest, and decide the same within a reasonable time. At the hearing, any party may appear in Person, by agent, or by attorney.

(5) Decision. The Board of Adjustment may, in conformity with the provisions of Minnesota Statutes Chapter 360 and this Crystal Airport Zoning Ordinance, affirm or reverse, in whole or in part, or modify the order, requirement, decision, or determination appealed from and may make such order, requirement, decision, or determination, as may be appropriate under the circumstances and, to that end, shall have all the powers of a Zoning Administrator.

N. JUDICIAL REVIEW.

(1) Any Person aggrieved, or any taxpayer affected, by any decision of the Board of Adjustment or any action of the Commissioner taken under Minnesota Statutes 360.063, subd. 6 or 6a, or any governing body of a municipality or county, or any joint airport zoning board, which is of the opinion that an order, requirement, decision, or determination of the Board of Adjustment or action of the Commissioner is illegal, may seek judicial review as provided in Minnesota Statutes § 360.072. The petitioner must exhaust the remedies provided in this Crystal Airport Zoning Ordinance before availing himself or herself of the right to seek judicial review as provided by this Section N.

O. PENALTIES AND OTHER REMEDIES

(1) Every Person who violates any provision of this Crystal Airport Zoning Ordinance, any zoning approval granted hereunder, any condition of any zoning approval granted hereunder, or any order, requirement, decision, or determination of a Zoning Administrator or the Board of Adjustment shall be guilty of a misdemeanor and shall be punished by a fine, imprisonment, or both of not more than the fine and imprisonment established for misdemeanors by state law. Each day a violation continues to exist shall constitute a separate offense for the purpose of the penalties and remedies specified in this section. This Crystal Airport Zoning Ordinance may also be enforced through such proceedings for injunctive relief and other relief as may be proper under Minnesota Statutes § 360.073, as it may be amended, and other applicable law.

P. RELATION TO OTHER LAWS, REGULATIONS, AND RULES

(1) Compliance Required. In addition to the requirements of this Crystal Airport Zoning Ordinance, all Structures, Trees, and uses shall comply with all other applicable city, local, regional, state, or federal laws, regulations, and rules, including Minnesota Statutes §§ 360.81-360.91 – Regulation Of Structure Heights, Minnesota Rules 8800.1100 – Regulation Of Structure Heights, and 14 Code of Federal Regulations Part 77 – Objects Affecting Navigable Airspace.

(2) Conflicts With Other Regulations. Where a conflict exists between any provision of this Crystal Airport Zoning Ordinance and any city, local, regional, state, or federal law, regulation, or rule applicable to the same area, whether the conflict be with respect to the height of Structures or Trees, the use of land, or any other matter, the more stringent law, regulation, or rule shall govern and prevail.

(3) Current Versions And Citations. All references to city, local, regional, state, and federal laws, regulations, and rules in this Crystal Airport Zoning Ordinance are intended to refer to the most current version and citation. If such references are no longer valid due to repeal or renumbering, the new laws, regulations, or

rules intended to replace those cited, regardless of the citation, shall govern.

Q. SEVERABILITY

(1) Effect Of Taking. In any case in which the provisions of this Crystal Airport Zoning Ordinance, although generally reasonable, are held by a court to interfere with the use or enjoyment of a particular Structure, Lot, or Tree to such an extent, or to be so onerous in their application to such a Structure, Lot, or Tree, as to constitute a taking or deprivation of that property in violation of the constitution of this state or the constitution of the United States, such holding shall not affect the application of this Crystal Airport Zoning Ordinance as to other Structures, Lots, and Trees, and, to this end, the provisions of this Crystal Airport Zoning Ordinance are declared to be severable.

(2) Validity Of Remaining Provisions. Should any section or provision of this Crystal Airport Zoning Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of this Crystal Airport Zoning Ordinance as a whole or any part thereof other than the parts so declared to be unconstitutional or invalid.

R. EFFECTIVE DATE

(1) This Crystal Airport Zoning Ordinance shall take effect on the 1st day of January, 2024. Copies thereof shall be filed with the Commissioner and the Registers of Deeds for Hennepin County, Minnesota.

EXHIBIT A – AIRPORT BOUNDARY

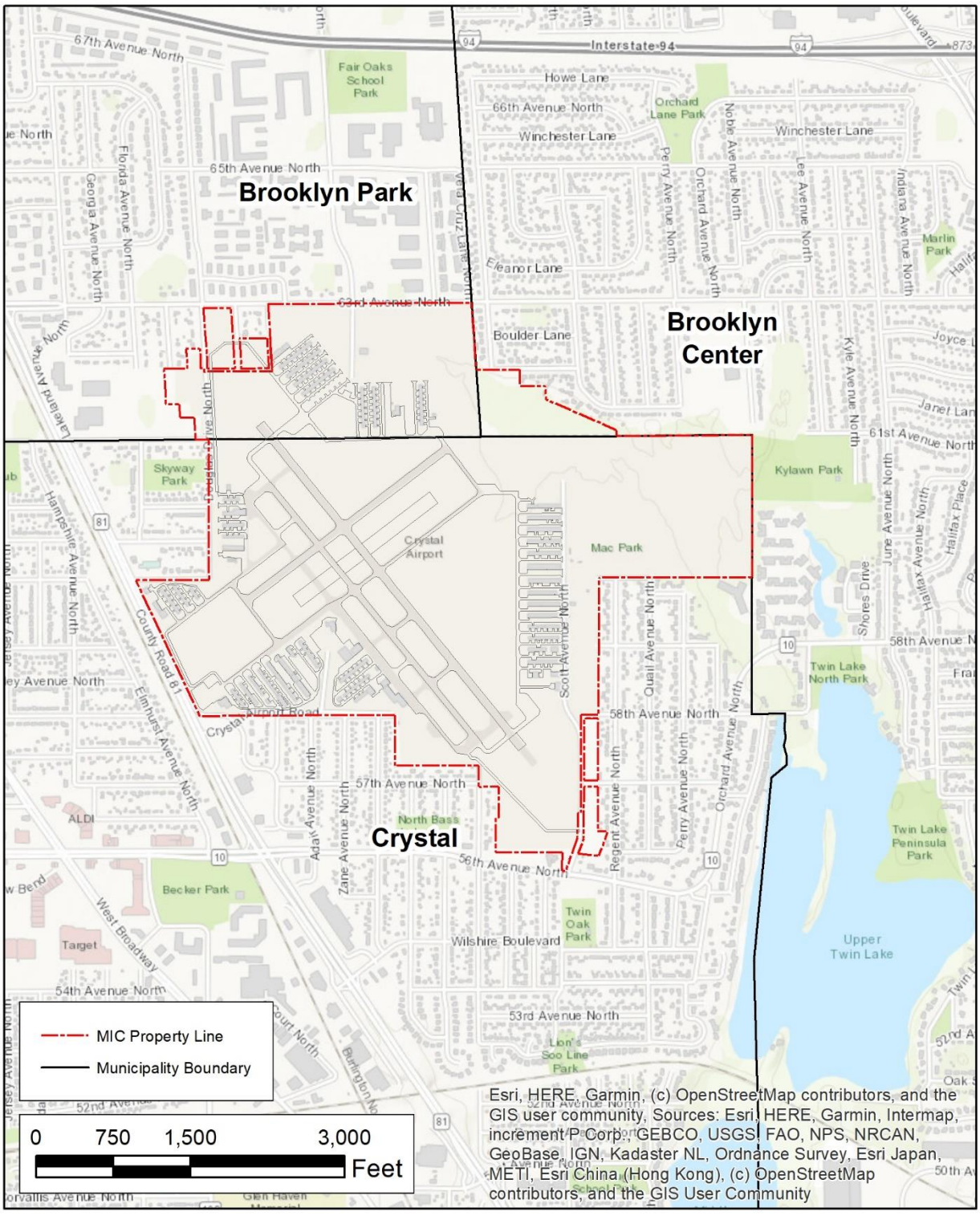


EXHIBIT B – JAZB LAND USE ZONE 1

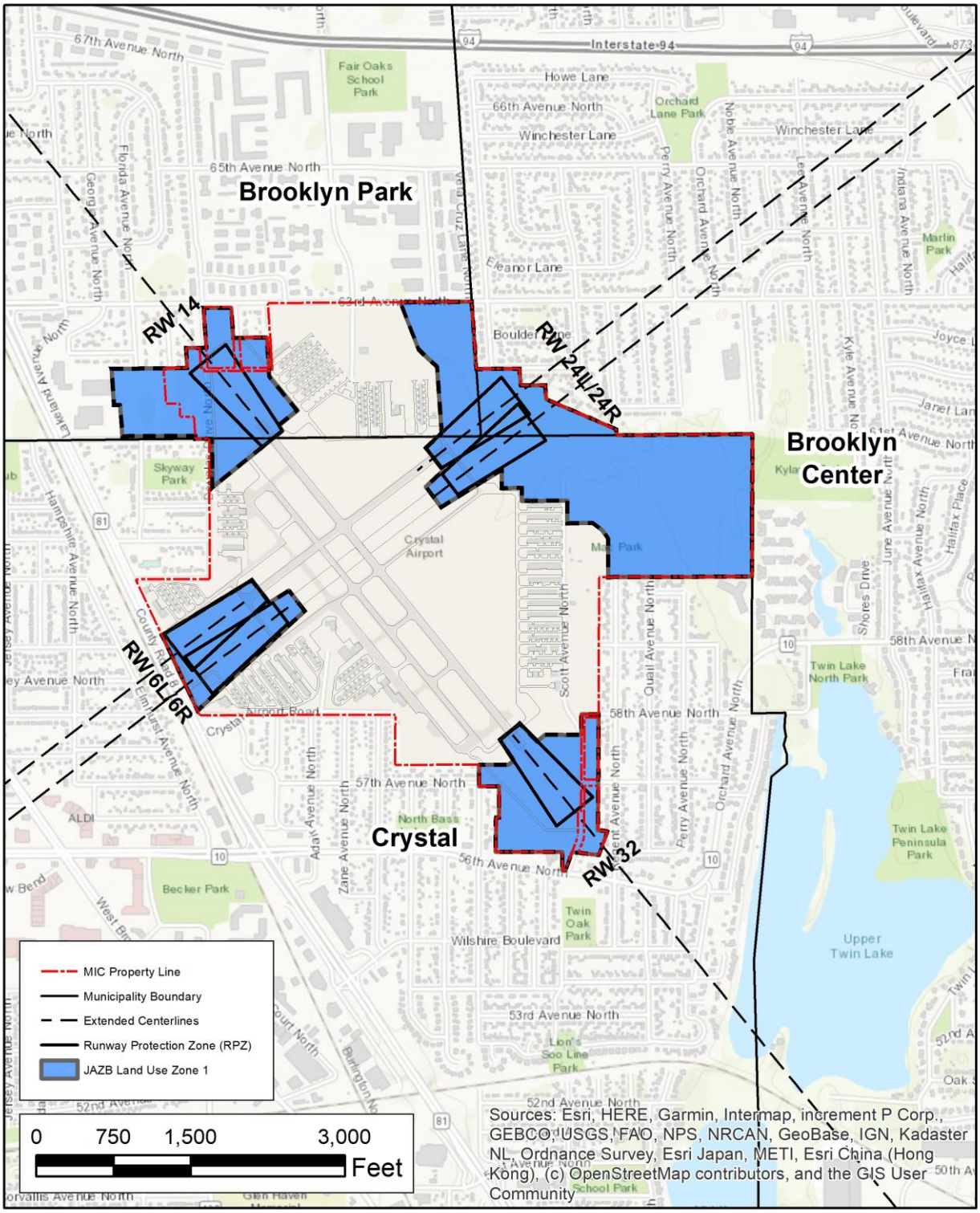


EXHIBIT C – JAZB LAND USE ZONE 2

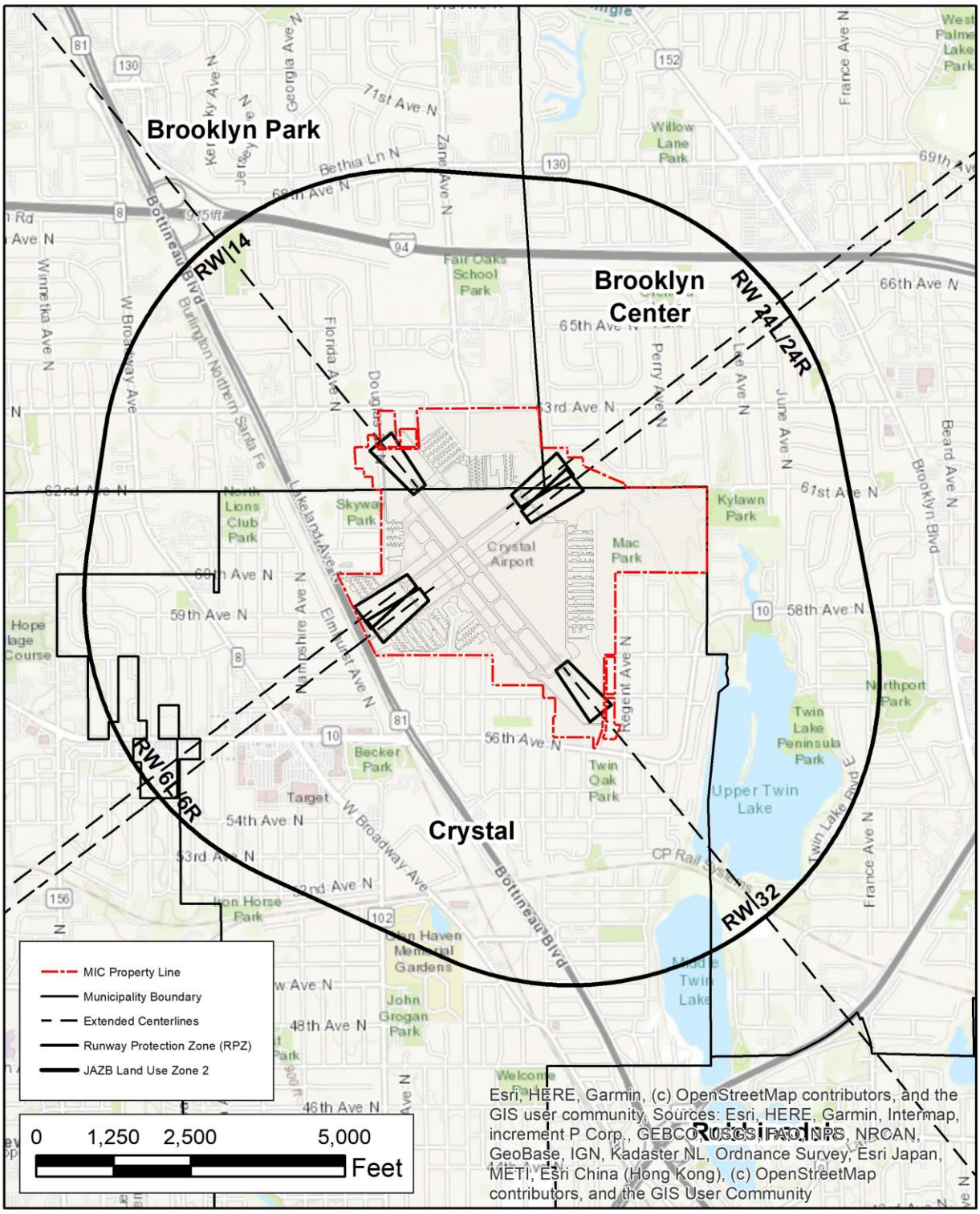


EXHIBIT D – AIRPORT BOUNDARY AND AIRSPACE ZONING LIMITS

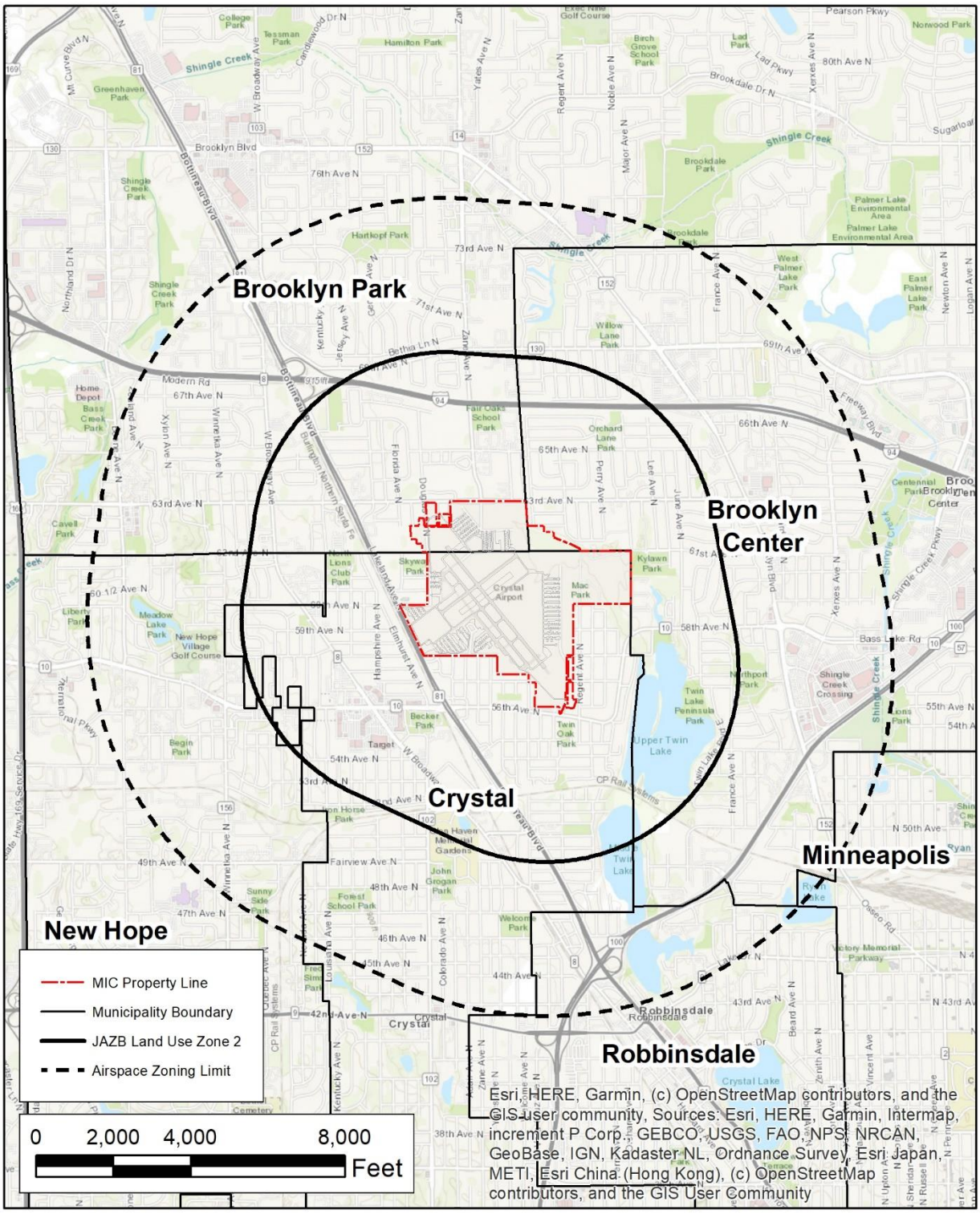
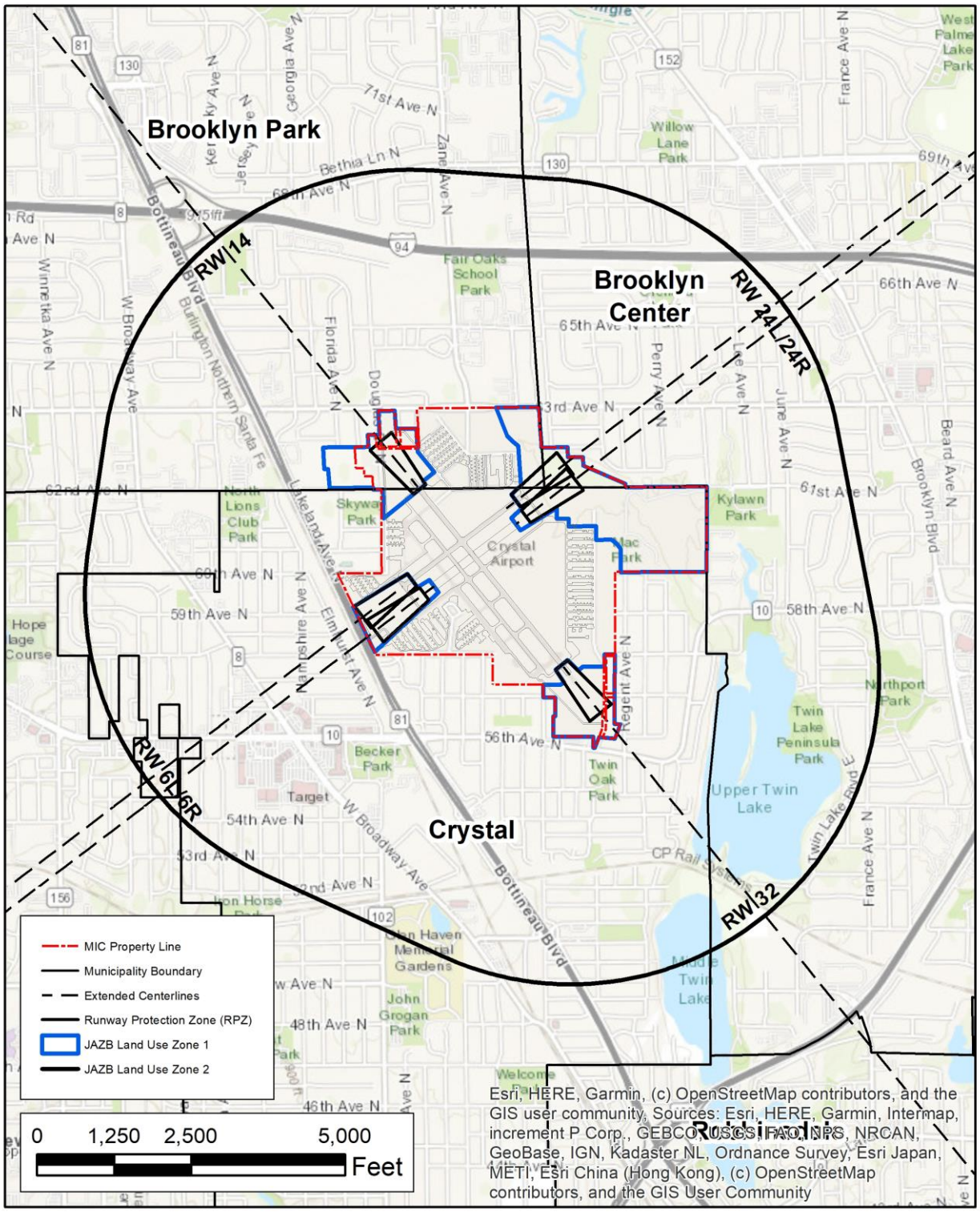


EXHIBIT E – AIRPORT BOUNDARY AND AIRSPACE CONTOURS



EXHIBIT F – AIRPORT BOUNDARY AND LAND USE ZONING LIMITS



MEMORANDUM

Date: February 14, 2024

To: Planning Commission Members

From: Paul Mogush, Planning Director

Subject: Planning Commission 2024 Work Plan

City of Brooklyn Park
City Hall
5200 85th Ave. N.
Brooklyn Park, MN 55443
763-424-8000
www.brooklynpark.org

Summary:

The Planning Commission work plan for 2024 is attached. Each Brooklyn Park commission develops an annual work plan at the beginning of the year using a standard format. Following is a brief summary of each item in the 2024 work plan:

Process land use applications and provide recommendations to the City Council:

This is the core and ongoing work of the Planning Commission.

Zoning code update:

Work began in 2020 to make changes to the zoning code and map to bring it in conformance with the 2040 Comprehensive Plan and to make some improvements to organization and readability. While we expected to bring forward changes for adoption in mid-2023, because of the 610 Corridor Development Study, this work was further delayed. The project is now back on track, and we expect to bring forward changes for adoption in mid-2024.

Planning for development northwest of 169 and 610:

The 2040 Comprehensive Plan designates the area northwest of 169 and 610 as developing between 2030 and 2040. Preparing for development there will require a substantial amount of planning and coordination of infrastructure and land use, which will begin in the third quarter of 2024. The newly proposed vision for a BioTech Innovation District will be incorporated into this work.

Attachment:

2024 Work Plan

Workplan | Planning Commission

2024

Time frame	Project or Task(s)	*BP2025*	Purpose (see next page for info)	Outcome (fill in after completed)
On-going	**Process land use applications and provide recommendations to the City Council**	☒1 ☒2 ☒3 ☒4 ☒5 ☒6	☐**Report/Comment** ☒**Recommend** ☐**Act** Initiated by: ☒*Commission* ☐*Council* ☐*City Manager*	
Q1 and Q2	**Zoning code update**	☒1 ☒2 ☒3 ☒4 ☒5 ☒6	☐**Report/Comment** ☒**Recommend** ☒**Act** Initiated by: ☒*Commission* ☐*Council* ☒*City Manager*	
Beginning in Q3	**Planning for development northwest of 169 and 610**	☒1 ☒2 ☒3 ☒4 ☒5 ☒6	☐**Report/Comment** ☒**Recommend** ☐**Act** Initiated by: ☒*Commission* ☒*Council* ☒*City Manager*	

1: United Community *2: Beautiful Places* *3. Thriving Economy* *4. Healthy & Safe People* *5. Increased Equity* *6. Effective & Engaging Gov't*

Workplan Projects: What's the purpose?

2024

Commissions can either initiate a project themselves OR be asked by the Council or City Manager to do one of the following:

Report/Comment

- Commission studies a specific issue or topic and **reports its findings or comments to the Council,** either in writing or in a Council meeting.
- Commission does not vote.
- No direct action is taken.

Example: Charter Commissioner provided a memo on the topic of Council Members being employed by the City part-time, at the Council's request.

Recommend

- Commission reviews a specific policy issue and **makes a formal recommendation** to City Council on what action to take.
- A recommendation requires a majority of the Commissioners' support.
- Individual member comments are not included.

Examples: Planning Commission recommends approval on land use actions; RPAC made a recommendation on amplified sound policy.

Act

- Commission **initiates or takes on a project**, approved by Council through their workplan.

Example: HRC partnered with a community organization on an event; City Manager requests that HRC coordinate the "All Are Welcome" sign contest.

Brooklyn Park 2025 Community Goals

Working together to make Brooklyn Park a thriving community inspiring pride where opportunities exist for all.

We asked and you answered! Our community wants to accomplish these goals by the year 2025:

United Community

A united and welcoming community, strengthened by our diversity.

- We have connected neighbors who understand and celebrate our unique cultures.
- Brooklyn Park is unified with a strong positive identity and image.
- Our community's activities, events and services are inclusive, multi-cultural, and accessible.
- We have places and spaces for diverse communities to gather.
- Residents of every age contribute to our community.

Beautiful Places

Beautiful spaces and quality infrastructure make Brooklyn Park a unique destination.

- Modern transportation options (drive, ride, walk, bike) connect people to education, jobs, and recreation.
- Quality recreation and park amenities inspire activity for all ages and interests.
- Our rich diversity is showcased through our vibrant music, art, food, entertainment, and cultural scene.
- Attractive key corridors, corners, and city centers create destinations that meet community needs.
- Neighborhoods are well-maintained with quality housing for all ages and incomes integrated throughout the community.

Thriving Economy

A balanced economic environment that empowers businesses and people to thrive.

- People of all ages and backgrounds enjoy financial stability.
- Residents and visitors support an abundance of retail stores, restaurants, and entertainment venues.
- Our business environment inspires private investment and job growth.
- Business and organizations of all types, sizes and specialties start, stay and grow here.
- We are a leader in environmental sustainability, benefiting our economy and community.

Healthy and Safe People

People of all ages have what they need to feel healthy and safe.

- Neighborhoods are empowered and supported by strengthened positive relationships with police.
- Youth are engaged in positive and quality experiences.
- Aging adults have services and amenities to thrive and age in place.
- Everyone has access to quality healthy food options.
- People have access to quality medical and emergency care.

Increased Equity

Partnerships that increase racial and economic equity empower residents and neighborhoods to prosper.

- Each resident has access to the training and support needed to get and keep a living wage job.
- Each student graduates high school with a pathway to college or career.
- Aging neighborhoods and commercial centers are revitalized through continuous investment.
- The community provides necessary supports and services for community members to overcome life challenges such as hunger, mental illness, and homelessness.

Effective, Engaging Government

Effective and engaging government recognized as a leader.

- The City provides quality services at a reasonable cost.
- Elected officials, commissions, and City staff reflect the diversity of the community and are culturally competent.
- City information is clear, accessible, and delivered in ways that meet the community's needs.
- City laws are understandable, equitably enforced, and relevant to the community.
- The City is well-managed and recognized as a great place to work.

Brooklyn Park
Unique. United. Undiscovered.

Goals adopted by City Council February 27, 2017